The Boston Medical and Surgical Journal

TABLE OF CONTENTS

February 8, 1923

ORIGINAL ARTICLES.

Medical Supervision at Antioch College. By *G. H. Bigelow, M.D.*, New York City 157
The Young "Cardiac Cripple," with Especial Reference to Ex-Soldiers. By *Francis H. McCrudden, M.D.*, Boston 161
A Plea for Testing Selected Single Specimens of Urine, with Special Regard to Diabetes. By *Horace Gray, M.D.*, Boston. 168

Current Literature 173

EDITORIALS.

Milk: Safe or Unsafe? 177
Functions of a Public Health Committee 178
Placental Transmission of Diphtheria Immunity 178
Sewage Disposal 179
News Notes 179

Legislative Matters 180
Legislative Hearing on House Bill 435 180
Disposal of War Surplus Material 180
Lecture Course in Mental Hygiene 181
Belchertown State School for Feeble-minded 181

OBITUARY.

Resolution on the Death of Dr. Pinkham 181
Recent Death 18

MISCELLANY.

Principal Causes of Death, 1921 182
An Appeal 182
Difficulty of Getting Accurate Reports of Cancer Deaths 182
Narcotics 182
Synthetic Thymol 183
Cheaper Radium 183
New Laboratory at the University of Chicago 183
Immunization against Measles 183
The American Child Health Association 183
Pneumonic Bacteriology 184
Advisory Committee on Anthrax of the International Labor Office 184
Expectation of Life in Epileptics 186
Venereal Disease Control in Chicago 186
Joint Committee on State and National Legislation 186
Vaccination in New Hampshire 187
New and Nonofficial Remedies 187
Council on Pharmacy and Chemistry 187

CORRESPONDENCE.

Historical Integrity. *Claes Julius Enebuske, Ph.D., M.D.* 187
A Physician Needed. *C. P. Silence* 188

Notices, Society Meetings 188

Original Articles.

MEDICAL SUPERVISION AT ANTIOCH COLLEGE.

BY G. H. BIGELOW, M.D., NEW YORK CITY

[From the Department of Industrial Medicine and Hygiene, Antioch College, Yellow Springs, Ohio.]

Antioch College has just completed its first year under the reorganization by Mr. Arthur E. Morgan, its president. It purposes to give the students cultural and professional training at the college synchronously with the development of responsibility, initiative, and self-reliance through practical experience in the surrounding industries and other institutions. With this in view, the greater part of the student body is divided into two sections, one of which is at college, while the other is in the industries. Thus each industrial, professional, or commercial position is covered by a pair of students. The college year is forty weeks with shifts in students every five weeks. The course for the student of average ability is expected to be six years.

Thus the medical problem presented is somewhat different from that commonly met with in the small college situated in the small community. (Yellow Springs has about 2,000 population, but is adjacent to Springfield and Dayton.) The outside contacts are more frequent, and close medical supervision is intermittent. The medical program has two distinct phases: The care and education of the students, and the stimulating of medical work in the surrounding industries. It is with the first part of the work that this report deals.

The medical work on the students is in no way original, the object being to institute a service such as is rendered in many of the colleges where thorough medical work is done. It consists of individual physical examinations, the administration of the accepted prophylactic measures, the holding of "sick call" twice daily, instruction in the fundamentals of personal hygiene, and supervision of water, milk, sanitation, and the dining room. The feature in which this report may be valuable is that the individuals under observation cover a considerable age group and include both sexes. The majority of reports on similar work which have come under our observation have been on somewhat more restricted age groups.

The individuals on whom the observations were made consisted of the faculty and their families, the students of the college (of whom the majority were Freshmen, being the first year of the reorganization), the Antioch Academy, and the Moraine Park School in Dayton. The two latter groups include students from kindergarten through high school age. The service rendered to the Moraine Park School consisted of two physical examinations at six month intervals on the students and such of the faculty as presented themselves, as well as occasional talks to the students and parent-teacher groups.

THE PHYSICAL EXAMINATIONS.

It was felt that the length of time that could economically be spent on each individual varied roughly with the age of the group. In general, the older the group the longer should be the interval for each examination. Thus on the college students an hour was allowed for the original examination. Thirty minutes of this time the student was alone with the physician. This was considered of primary importance in order that the student might feel free to discuss any matter pertaining to his health. The other half hour was taken up with dressing, filling out a brief questionnaire, and observations of weight, height, hemoglobin, collection of urine, etc. With the younger students the time interval was reduced to forty minutes. With the faculty an effort was made to have no limit to the time interval. For reëxamination thirty minutes was allowed.

As pointed out by Lee, Geer, and Brown,[1] defects of bodily mechanics assume at least numerical preponderance over any other group of defects among first-year college students. This was found to be the case in all age groups under observation, with the possible exception of the youngest children. At the time of the physical examination an outline sketch was made of the individual by means of a simple plate camera, and the postures were classified as A, B, C, or D. This is the method suggested by Brown,[2] and used on Harvard Freshmen.[3] These were filed and checked against similar sketches made at re-examinations. The results by age groups and sexes are shown in Table I.

TABLE I.

POSTURES.

FEMALES.

Age Groups	A. No.	A. %	B. No.	B. %	C. No.	C. %	D. No.	D. %	Total
10-14 yrs.	1	3.5	13	45.5	8	28.0	7	24.5	29
15-19	1	2.3	17	39.2	17	39.2	8	18.4	43
20-24	0	0.0	6	46.2	3	23.1	4	30.7	13
Total	2	2.2	36	42.3	28	33.0	19	22.4	85

MALES.

Age Groups	A. No.	A. %	B. No.	B. %	C. No.	C. %	D. No.	D. %	Total
10-14	0	0.0	10	23.3	21	48.8	12	27.9	43
15-19	7	4.9	49	34.3	68	47.5	19	13.3	143
20-24	6	9.1	24	36.4	26	39.4	10	15.2	66
Total	13	5.1	83	33.0	115	45.7	41	16.3	252

BOTH SEXES.

Age Groups	A. No.	A. %	B. No.	B. %	C. No.	C. %	D. No.	D. %	Total
10-14	1	1.4	23	32.0	29	40.2	19	26.4	72
15-19	8	4.3	66	35.5	85	45.7	27	14.5	186
20-24	6	7.6	30	38.0	29	36.7	14	17.7	79
Total	15	4.5	119	34.4	143	41.4	70	19.7	337

The older age groups are too small to be included, while the five to nine group is not given because the postures deviate so from the standards of the classification used as to be impossible of inclusion. It would seem that the outline sketches of children in this age group will be of value largely for comparison at later examinations rather than for an absolute classification at the time of examination, except in the markedly abnormal. In fact, this is the greatest value of the sketches at any age.

Physical examinations are of value just in so far as something is done about the defects detected. The corrective postural work at Antioch was in the hands of the physical director, Earl E. Prugh. Since our interest was in the correction of posture and not in the method by which this correction was accomplished, it was decided that attendance at corrective classes should not be compulsory, though a minimal amount of weekly exercise was required. But it was made a requisite of any degree that the individuals with poor posture should show improvement. At Moraine Park School, W. H. Marquardt had this work in charge. The results of the reëxaminations of those showing unsatisfactory postures (*i.e.*, C or D) is shown in Table II.

TABLE II.

CHANGES IN POSTURES.

	Improved No.	Improved %	Same No.	Same %	Deteriorated No.	Deteriorated %	Total
Antioch College	46	59.0	32	41.0	0	0.0	78
Antioch Academy	10	83.2	2	16.6	0	0.0	12
Moraine Park School	51	61.4	31	37.3	1	1.3	83
Total	107	61.9	65	37.5	1	0.6	173

The matter of improvement is largely dependent on stimulating the interest of the student in his posture. This is the problem for the school physician and physical director.

In the spring the physical director gave the Antioch College students one of the so-called "Physical Efficiency Tests," which consisted in shot put, high jump, 100-yard dash, etc. Each student was scored on the basis of a possible 100. Anyone below 60 was marked "failure" without being given a score. For the sake of charting, these "failures" are arbitrarily called 50. The relation of scores in the "Physical Efficiency Tests" to posture is shown in Table III.

TABLE III.

RELATION OF PHYSICAL EFFICIENCY SCORE TO POSTURE.

Posture	No. in Group	Average Score	Maximum Score	Minimum Score	Standard Deviation
A	4	77	85	70	5.8
B	39	[illegible]	92	50	16.2
C	19	79.9	86	50	9.7
D	4	66.5	79	60	6.9

We were rather surprised to find the figures as suggestive as they were, since in the age group which includes the Freshmen, much postural defection can be compensated by muscular development, as pointed out by Lee.[4] This group is small and a larger series might well not show such a correlation as appears here between the ability to obtain a high score in the "Efficiency Test" and the posture.

Selections for the football squad were, of course, based on demonstrated ability and not on postural classification. So it is interesting that the twenty-six individuals selected fell into the following postural classifications: A 1 or 4%; B 9 or 36%; C 12 or 48%; D 4 or 16%. On the other hand, the male student body in the college (163 individuals) was classified thus. A 6.7%; B 34.4%; C 42.9%; D 16. The correlation of the physical efficiency and posture is almost absent, possibly for the same reason given above.

Others[5] have found that orthostatic albuminuria was more prevalent among the poor posture groups. This was not found strikingly in our small series.

An important factor in bodily mechanics is the use of the feet. Since all the weight in standing is supported by the feet it is obviously to the advantage of the individual that he use his feet so that this weight may be borne to the greatest mechanical advantage. In classifying the use of the feet the method employed by Brown[1, 6] was used. When the center of weight bearing passed to the outer aspect of or through the great toe the foot was called A or B, respectively. Where it passed centrally to the great toe it was called C or D. The individual was classified according to the poorer foot. The results by age groups and sexes are seen in Table IV.

TABLE IV.

MECHANICAL USE OF FEET.

FEMALES.

Age Group	A. No.	A. %	B. No.	B. %	C. No.	C. %	D. No.	D. %	Total
5-9	8	28.6	9	32.1	11	39.3	0	0.0	28
10-14	7	25.0	10	35.7	11	39.3	0	0.0	28
15-19	7	15.9	16	36.7	16	36.7	5	11.7	44
20-24	2	15.8	2	15.8	4	30.8	5	38.6	13
Total	24	21.2	37	32.8	42	37.1	10	8.9	113

MALES.

Age Group	A. No.	A. %	B. No.	B. %	C. No.	C. %	D. No.	D. %	Total
5-9	8	23.5	20	58.9	6	17.6	0	0.0	34
10-14	19	41.3	15	32.6	12	26.1	0	0.0	46
15-19	42	28.8	47	32.2	51	34.9	6	4.1	146
20-24	23	34.9	22	33.4	17	25.8	4	5.9	66
Total	92	31.5	104	35.1	86	29.4	10	4.0	292

BOTH SEXES.

Age Group	A. No.	A. %	B. No.	B. %	C. No.	C. %	D. No.	D. %	Total
5-9	16	25.8	29	46.8	17	27.4	0	0.0	62
10-14	26	35.1	25	33.8	23	31.1	0	0.0	74
15-19	49	25.8	63	33.2	67	35.2	11	5.8	190
20-24	25	31.7	24	30.5	21	26.6	9	11.2	79
Total	116	28.7	141	34.8	128	31.9	20	4.6	405

There are two rather striking features in Table 4. One is the progressive increase in the D group with the increasing age groups. The other is the consistently higher percentage of females with poor use of their feet over males in the same age group. Both of these are explained probably in a large measure by shoes.

The lack of definite correlation between posture and the presence of albumin in the urine has already been mentioned. The students in the college showing albumin were repeatedly examined. All but two showed the absence of albumin in the early morning specimens as pointed out by Parmenter,[5] and were considered of the orthostatic type. Of the two, one was apparently incited by or related to the typhoid inoculations, as it was aggravated by the second inoculation and cleared up gradually after it was decided to withhold the third. This student was unfortunately not examined previous to the first inoculation, but there was no history of particular significance obtained. The other has shown albumin at every examination over a period of eight months. The sediment is negative except for a considerable quantity of phosphates. There are no subjective symptoms or other physical findings of significance. The condition does not respond to limited diet. The family physician suggests that it may be related to his hay fever.

The cases at Moraine Park School could not be followed as carefully. When albumin was found, it was reported to the parent with the suggestion that the matter be taken up with the family physician, who was written to personally when his name could be obtained. Each student showing albumin was asked to bring an early morning specimen, which was done in a certain number of cases. The presence of albumin in the urine in relation to age and sex is shown in Table V.

TABLE V.

ALBUMIN.

FEMALES.

Age Group	No. in Group	No. showing Albumin	Percent Showing Albumin
5-9	29	2	7.0
10-14	31	7	22.5
15-19	42	2	4.7
20-24	14	1	7.0
Total	116	12	10.3

MALES.

Age Group	No. in Group	No. showing Albumin	Percent Showing Albumin
5-9	40	4	10.0
10-14	46	5	11.0
15-19	145	11	7.5
20-24	66	3	4.6
Total	297	23	7.7

BOTH SEXES.

Age Group	No. in Group	No. showing Albumin	Percent Showing Albumin
5-9	69	6	8.7
10-14	77	12	15.3
15-19	187	13	6.9
20-24	80	4	5.0
Total	413	35	8.5

Table 5 shows that in this series both sexes gave the highest incidence of albumin in the urine in the 10-14 group, and that there is a considerable falling off in the later age groups. This would confirm the findings of Parmenter,[5] that orthostatic albuminuria is a condition that tends to be outgrown. It is interesting that while "approximately 8%" of 513 Harvard Freshmen[5] showed this condition, 7.5% of our male students in the 15-19 year age group showed it.

There was a considerable range in the blood pressure of this group of supposedly normal individuals. The systolic pressure varied from 90 to 145 without, in the vast majority of cases, there being any other subjective or objective symptoms. In some cases this persisted, in others it was transitory. The pulse pressure was, in general, fairly constant. These are some of the cases that it will be extremely interesting to watch from year to year. We may be able to look back and see that this deviation of pressure from the normal is of more importance than it now seems. However it would appear at present unwarranted to allow these students to become physically self-conscious by dwelling on such an apparently isolated deviation from the accepted normal.

In the matter of weight various tables were tried and none found entirely satisfactory. The conventional charts, which take into consideration standing height and age, were used, such as those put out by the Child Health Organization, and the Life Extension Institute. According to the work of Gray and Root[7] Dreyer's method of weight determination is the most satisfactory of those taking into consideration such factors as sitting height and circumference of the chest. Consequently Dreyer's tables were used.[8] The result of the observations on the 213 normal individuals based on sitting height and chest circumference is given in Table VI.

TABLE VI.

WEIGHT DETERMINATION.

Sex	No. of Subjects	Average Deviation	Maximum Deviation	Minimum Deviation	Standard Deviation
Female	44	5.7%	+37.7%	—20.1%	10.2%
Male	169	3.3%	+14.1%	—19.5%	3.8%

From the above it would seem that the tables for the males are more satisfactory than for the females. Although the number of observations on females is much less than on males, both maximum, minimum and standard deviations are greater in the females. This might in part be accounted for by the greater difficulty in obtaining satisfactory chest circumference in the female because of the configuration of the breast, although Dreyer[8] makes allowance for this in his formula. In studies on 32 healthy males Gray and Root[7] obtained an error of 4.47%, while on 169 healthy males we obtained an average error of 3.3%. That result is far more satisfactory than with any other method tried, though in individual cases it was quite disappointing.

A list of the other findings of the 699 physical examinations on 454 individuals is given in Tables VII and VIII. The results are divided into the two tables because the opportunity for the follow-up work differed. At Antioch College and Academy the physician was in residence, which made close supervision possible. At Moraine Park School the physician saw the pupils twice in the course of the school year. Suggestions were made at the first examination and results checked and further suggestions made at the second.

In a separate column is shown the number of defects about which something had been done. This, it would seem to us, is the ultimate criterion of the value of any organization which has as a whole or a part of its function the performing of physical examinations. The two tables are not absolutely comparable as "Poor shoes" is in Table VIII and not in Table VII. This is due to a defect in records and does not mean that at Antioch College and Academy

TABLE VII.

OTHER DEFECTS.

COLLEGE AND ACADEMY.

Defects	Number Found	Percent Found	Number Attended to	Percent Attended to
Neglected Teeth	52	20.9	23	44.3
Endemic Goitre—Total	47	18.9	45	95.7
In Males—Slight	27	14.0	27	100.0
In Females—Slight	13	22.3	13	100.0
In Males—Obvious	3	1.5	3	100.0
In Females—Obvious	4	7.1	2	50.0
Total in Males	30	15.5	30	100.0
Total in Females	17	29.4	15	88.3
Defective Vision	31	12.4	24	77.4
Poor Hygiene of the Bowels	23	9.2	18	78.3
Tonsils	19	7.5	7	35.0
Albumin in Urine	12	4.7	12	100.0
In Males	11	5.7	11	100.0
In Females	1	1.8	1	100.0
Chronic Joints	11	4.4	1	9.1
Menstrual Irregularity	5	8.9	4	80.0
Headache	5	2.0	4	80.0
Phimosis	4	1.6	2	50.0
Hernia	3	1.2	1	33.3
Cardiac Murmur	3	1.2	3	100.0
Cardiac Arrhythmia	2	0.8	0	0.0
Haemorrhoids	2	0.8	2	100.0
Old Poliomyelitis	2	0.8	2	100.0
Petit Mal	1	0.4	0	0.0
Chronic Sinus	1	0.4	1	100.0
Chronic Middle Ear	1	0.4	1	100.0
Hydrocele	1	0.4	0	0.0
Sugar in Urine	1	0.4	1	100.0
Suspected Tuberculosis	1	0.4	1	100.0
Infected Toe	1	0.4	1	100.0
Cardiac Self-consciousness	1	0.4	1	100.0
Nocturia, No Cause Found	1	0.4	1	100.0
Color Blindness	1	0.4	0	0.0
Chronic Nasal Obstruction	1	0.4	0	0.0
Totals	231		155	67.5

TABLE VIII.

Moraine Park School.

Defects	Number Found	Percent Found	Number Attended	Percent Attended
Neglected Teeth	53	27.2	30	56.6
Endemic Goitre—Total	47	24.1	12	25.6
In Males, slight	17	13.9	0	0.0
In Females, slight	23	31.5	5	21.7
In Females, obvious	7	9.6	7	100.0
In Females—Total	30	41.1	12	40.1
Tonsils	31	15.9	7	22.6
Poor Shoes	24	12.3	12	50.0
Albumin in Urine	23	11.8	13	56.6
Males	12	9.8	6	50.0
Females	11	15.1	7	63.5
Smegma	15	7.7	5	33.3
Poor Hygiene of Bowels	14	7.2	9	64.3
Enlarged Lymph Glands	14	7.2	1	7.2
Adhesions of Foreskin	9	4.6	1	11.1
Chronic Catarrh	8	4.1	0	0.0
Defective Vision	6	3.1	2	33.3
Cardiac Murmur	6	3.1	4	66.6
Chronic Joints	5	2.6	0	0.0
Hernia	4	2.1	1	25.0
Headache, Cause Not Found	3	1.5	1	33.3
Sacroiliac Strain	2	1.0	0	0.0
Phimosis	2	1.0	0	0.0
Hypothyroid	2	1.0	0	0.0
Spinal Malformation	1	0.5	1	100.0
Chronic Nasal Obstruction	1	0.5	0	0.0
Totals	270		99	36.6

there were not a considerable number of persons wearing unsatisfactory shoes. They were unsatisfactory for the most part because they were too short, and had a poor inside line. Again, the presence of smegna is tabulated in Table VIII only. This difference is one of record rather than of fact. It has been very surprising to find how many have had nothing said to them about cleanliness of the external genitalia.

The average age of the subjects in Table VII was 19.05 years, and in Table VIII, 12.5 years. The total defects in Table VII were found in 138, or 54.8% of the 252 subjects, and in Table VIII in 155 or 71.7% of the 202 subjects. These figures are given with some hesitation since the two tables, as mentioned above, are not exactly comparable, and since it may be assumed that conversely 45.2% and 28.3%, respectively, of the two groups were considered "normal." The examinations were of necessity not exhaustive, but even taking into consideration posture, weight, use of feet, blood pressure, etc., it would be difficult to pick out any single individual and say that he was our idea of normal.

It is of some interest to note the order of frequency in the two groups. The variations are largely accounted for, it would seem, by the differences in age, although the economic and geographic status of the two groups is not identical. Neglected teeth bulk largest in both groups. The higher percentage in Table VIII may be because this is a younger age group, there being some difference of opinion among dentists as to how much attention should be paid to the care of temporary teeth. Endemic goiter is more prevalent in the younger group also. The average age of this group is nearer that of puberty which is, of course, one of the periods of greatest predisposition to the disease. Also the younger group resides exclusively in the goiter district, while a certain part of the older group comes from the non-goiterous district. Defective vision (judged by distant vision and history) and poor hygiene of the bowels are important in the older group. Suspicious tonsils are more numerous in the younger. These, it seems reasonable to assume, are influenced by age. Further comparison is obvious.

The standard of defects that have received adequate attention is, perhaps, not high. After the physical examinations a summary was sent to each parent. This, however, does not mean that the defect will receive attention. In the college and academy group certain defects could be well corrected by the physician in attendance, such as iodine for endemic goiter, advice as to control of the bowels, observation of suspicious tonsils, further study of albumins and headaches, etc. For another group including teeth, defective vision, markedly diseased tonsils, etc., it is the duty of the physician to see that the student goes to a competent specialist, and to be assured that proper treatment is not deferred because of economic considerations. In this matter many of the best doctors locally have helped in a most gratifying way. When a student has seen a competent specialist regarding a defect found, that defect is considered "attended to" no matter what the opinion of the doctor may be as to the need of operation, glasses, or what not, provided that what is advised is carried out. With the Moraine Park School students, advice at the time of examination, letters to parents, and in some cases family physicians, had to suffice. Attention to the defects was checked up at reëxamination by observation and the statement of the student.

At the time of the first physical examination of the male college students, the question as to indulgence in coitus was asked in connection with the venereal history. Of 119 students, 86 or 72.2% answered in the negative, and 33 or 27.8% in the affirmative. The average age of the group was 20.7 years; of the negatives, 19.6 years, and of the affirmative, 21 years. The maximum age was 32 years and the minimum age 16 years.

These figures would not apply to the student body at present, since during the year between 25% and 30% of the male student body was eliminated because of poor attitude toward the college, defective behavior and failure to meet college standards generally. These statements of the students, as well as the other matters of medical record, were considered as confidential and treated as such.

PROPHYLAXES.

Four of the accepted prophylactic procedures were offered to the students of the college and academy, and to the faculty and their families. It was deemed advisable not to make these procedures compulsory, but to use the percentage of those availing themselves of the opportunity as an index of the persuasive power of the physician. The history, theoretical basis, mode of administration, and results, were explained to the students. The results are shown in the following tables:

TABLE IX.

TYPHOID INOCULATIONS.

	College		Academy		Faculty and Families†	
	No.	%	No.	%	No.	%
3 Inoc.	99	54.8	24	54.5	16	32.1
2 Inoc.	19	11.0	1	2.2	1	2.1
1 Inoc.	10	5.6	2	4.5	0	0.0
Immune*	19	11.0	0	0.0	0	0.0
Total	147	81.2	27	61.2	17	34.2

†Exclusive of children in college and academy.
*Having had inoculation within three years.

TABLE X.

SCHICK TEST.

	College		Academy		Faculty and Families	
	No.	%	No.	%	No.	%
Tested	156	86.3	30	68.3	13	26.0
Positive	50	32.1*	15	50.0*	7	53.8*
Not Tested	25		14		37	

*Percent. of those tested.

TABLE XI.

TOXIN-ANTITOXIN IMMUNIZATIONS.

	College		Academy		Faculty and Families	
	No.	%	No.	%	No.	%
3 Inoc.	34	68.0†	13	86.6†	6	85.7†
2 Inoc.	2	4.0	0	0.0	0	0.0
1 Inoc.	7	14.0	1	6.6	0	0.0
No Inoc.*	7	14.0	1	6.6	1	14.2

†Per cent. of those showing positive Schick tests. Five months after the diphtheria immunizations the Schick test was repeated. Of the 22 persons taking the test 5 were still positive. These 5 had all taken the three toxin-antitoxin injections.
*These showed positive Schick tests but did not take the immunization.

TABLE XII.

SMALLPOX VACCINATION.

	College		Academy		Faculty and Families	
	No.	%	No.	%	No.	%
Primary "take"	14	12.9	6	31.5	5	20.0
Accelerated	32	29.6	3	15.8	6	24.0
Immediate	39	36.2	5	26.3	7	28.0
"take"*	13	12.1	1	0.0	2	8.0
Total "takes"	98	54.1†	14	31.8†	20	40.0†
No "take"	10	9.2	5	26.3	5	20.0
No Inoc.	73	40.3†	25	56.8†	25	50.0†

*Type not recorded.
†This percentage is of all the members of this group. Other percentages are of those who took inoculations.

TABLE XIII.

IODINE PROPHYLAXIS FOR ENDEMIC GOITRE.

Number of Pills Taken	College No.	Academy No.	Faculty and Families No.
10	88	32	24
9	27		3
8	13	1	3
7	6		3
6	3		
5	4		
4	5		
Total:	146 or 76.5%	33 or 75.1%	33 or 66%

The administration of iodine was based on the splendid work of Marine and Kimball[9] in the Akron schools. The technique was varied a little in that a 2½ grain pill of potassium iodide was given daily. The complete course consists of ten pills. Recently we have begun serving iodinized salt in the college dining room as suggested by Sloan[10] and Hayhurst.[11]

The prophylaxes were first offered in the order reported, though they were available at any time during the year. The typhoid inoculations were offered first because of local conditions, the seriousness of the disease, etc. This was, perhaps, a mistake, since the occasional reactions following these inoculations are the most severe of any and go down in local history. However, there is a danger of developing an antipathy to preventive procedures by overzealousness, and it is questionable whether the number accepting typhoid inoculations would have been even as high as it was had they been offered as the fourth rather than the first of the prophylactic procedures.

The typhoid vaccine was furnished by the Ohio State Department of Health. The diphtheria toxin, the toxin-antitoxin mixtures, and the vaccine virus were purchased from the Massachusetts State Department of Health. The potassium iodide was obtained from a local drug house.

VISITS CLASSIFIED AS TO CAUSES.

It was felt that the various reasons which prompted the students and faculty to avail themselves of the services of the medical department might be of interest. They are classified in Table XIV.

TABLE XIV.

REASONS FOR REPORTING AT THE MEDICAL DEPARTMENT.

Revisits		3150
Prophylactic Procedures		735
Goitre	212	
Diphtheria	199	
Typhoid	172	
Smallpox	152	
Physical Examinations		699
Upper Respiratory Tract Infection		232
Weight		154
Trauma		71
Skin Diseases		66
Furunculosis	18	
Infections	15	

Dermatitis Venenata	8	
Acne	6	
Tinea Cruris	5	
Burns	2	
Corns	2	
Scabies	2	
Urticaria	2	
Verruca Vulgaris	2	
Eczema	1	
Herpes Labialis	1	
Herpes Zoster	1	
Pigmented Moles	1	
Urine Specimen		54
Sprains and Strains		46
Ankle	24	
Finger	10	
Wrist	5	
Shoulder	4	
Sacroiliac	2	
Toe	1	
Abrasion		43
Gastro-Intestinal		34
Ingrowing Toe Nail		1
Infectious Jaundice		1
Nightly Emission		1
Pernicious Anemia		1
Syphilis		1
Twitching of Eye Lids		1
Total		5403
Average Visits per Day*		12.51
Average Visits per Person per College Year†		19.65

*This is during the college year of 40 weeks or 240 days, Sundays excluded.

†The 404 physical examinations at Moraine Park School are excluded. The size of the community to which medical service was offered varied slightly. 275 is taken as an average figure for the number of persons in the college, academy, faculty, and faculty families.

In reviewing the figures in Table XIV it must be remembered that the majority of the persons making these visits had had a physical examination early in the college year. This might in part account for the relatively small number of visits for gastro-intestinal causes, eye strain, menstrual irregularities, etc. Also, many more weights were taken and specimens of urine examined than the table would indicate. Only when nothing else was done at the visit were these given as the cause. The same applies to Wassermanns. The reactions following prophylactic procedures were none of them alarming. Although the students would feel that the table underestimates the number, it shows how very few reported to the doctor's office for that reason.

DISCUSSION.

The figures here presented are drawn from a relatively small community observed over a short period of time. However, it would seem that it should be possible to draw some conclusions, though they will for the most part be only confirmatory or contradictory of work previously presented by others.

It appears from the number of defects that there is ample reward for physical examinations on college or pre-college students. The time will probably come when it will be felt that the college age is far too late to initiate corrective work.

A college medical department has as one of its chief functions the following up of the defects found at such examinations.

Mechanical defects of the bony structures bulk largest in this group. There was no progressive deterioration with increasing age groups. Perhaps this group is too small, or we should not expect such progression. That such defects lead to inefficiency is suggested by considering the scores in "physical efficiency tests." These are very crude and inexact methods of judging bodily efficiency, but it seems almost self-evident that such handicaps may materially interfere with a student's making the most of the opportunities offered at college and in later life be enough to throw the balance away from success.[12]

Such mechanical defects can in a certain per cent. of cases be improved with surprising ease. However, it is probable that further improvement in the group will be accomplished only with the expenditure of relatively greater effort.

The Dreyer method of determining the weight of individuals is more satisfactory than the conventional standing height and age tables. The group results for the males were more exact than for the females, possibly for reasons already discussed. But there were individual cases among males where the results were far from satisfactory.

Orthostatic albuminuria was found to be slightly more frequent among females, and there was in general a slight tendency to a decrease in frequency in increasing age groups.

Blood pressure in apparently normal individuals may show a wide variation, though the pulse pressure tends to remain fairly constant.

Other findings vary in their incidence with age groups, though in both of our series defective teeth comes first. Endemic goiter, of course, is influenced by geographic location and age. From the figures given of the answers to the question of promiscuous intercourse it is not intended to overemphasize the importance of age. Environment would seem to be the overwhelmingly important factor in this matter. However, age is more concrete than environment and certainly must have some bearing on the subject. But to overemphasize its importance would seem to denote a somewhat cynical attitude toward the problem.

The danger of antagonizing a community by over prophylactication has been mentioned. To avoid this no opportunity should be lost to explain the theory, purpose and results of the various procedures. It must be said that the community under consideration was, on the whole, receptive. It might well have been more difficult without the publicity given preventive medicine during the recent war.

Our percentage of individuals susceptible to diphtheria was considerably higher than we had expected from the figures given by Park and Zingher[13] and Garland[14]. This might be accounted for in part by the rural element in the community under consideration. Also our group is small. The number of inoculated individuals still susceptible is quite large, but again our figures are very small.

The number of individuals of all ages in this community who have never been vaccinated is appalling. It is, of course, more of a reflection on the community than on the individual. Because of the presence of smallpox in the immediate vicinity, because the students during their working period were spread over a considerable area, mostly in large industrial centers, because of the impossibility of stating at what intervals an individual should be revaccinated to insure complete immunity, and because of the relatively low percentage of immune individuals in the surrounding communities, all were urged to take vaccination, irrespective of their vaccinational past. Of the 152 presenting themselves 20 or 13.1% had no "take." Some of the failures had never been vaccinated, while some showed good scars. It was surprising how many showing good scars of recent vaccinations gave immediate or accelerated reactions. All those having no "take" and showing no scar were repeatedly reinoculated up to five times by puncture as well as incision, which was the method generally used.[15] In the two resistant cases we stopped only because the patient refused to submit further. Both batches of virus repeatedly gave "takes." Given a potent virus how often should a person without scar or history of a "take" be reinoculated before one can feel assured that they belong to that class of individuals, said to be small, who are naturally resistant to cow-pox?

The classification of causes of visits to the medical department, though influenced by previous physical examinations, is illuminating in many ways. In the upper respiratory tract infections the greatest need for prevention would seem to lie. All the students were urged to report early when still uncertain as to whether a cold was going to develop or not. The temperature was taken. Forced fluids and early bed were advised. There was no opportunity for isolation and it would have interfered too much with the routine of the institution. Advice and, if necessary, medicine was given for the bowels. Argyrol was used freely in the nose and throat. Usually five to ten grains of aspirin were given. The students returning from their working period furnished vehicles for infections prevalent in the large industrial communities. Though no figures are available, it would seem that with but one case of pneumonia the upper respiratory infections with us were certainly no more virulent than in the surrounding localities. But it is utterly out of the question to say that the early reporting and treatment of common colds reduced the morbidity.

Again with increasing confidence in the physician more students should report to discuss matters pertaining to personal sex hygiene. There must be innumerable vexing questions. Such an invitation was extended at the few talks given on the subject. To obtain this end the student must feel absolute confidence that his record is a matter of the strictest privacy.

REFERENCES.

1 Lee, R. I., Geer, W. H., and Brown, L. T.: Bodily Mechanics in Harvard Freshmen. Am. Phys. Ed. Rev., 1920.
Lee, R. I.: Preventive Medicine and Hygiene in Relation to Colleges. BOSTON MED. AND SURG. JOUR., clxxxiii, 750-754, 1920.
2 Brown, L. T.: Bodily Mechanics and Medicine. BOSTON MED. AND SURG. JOUR., clxxxii, 649-655, 1920.
3 Geer, W. H.: Prescribed Physical Training for Harvard Freshmen. Harvard Graduates Magazine, Dec., 1920.
4 Lee, R. I.: Correction versus Compensation of Physical Defects. Am. Jour. Med. Sc., clx, 651, 1920.
5 Parmenter, D. C.: Observations on the Significance of Functional Albuminuria in Young Men at Harvard University. BOSTON MED. AND SURG. JOUR., clxxxiii, 677-681, 1920.
6 Brown, L. T.: Am. Jour. Orth. Surg., xv, 774, 1917.
7 Gray, H., and Root, H. F.: Weight Prediction by the Formula of Bornhardt, of von Pirquet, and of Dreyer. BOSTON MED. AND SURG. JOUR., clxxxv, 28-32, 1921.
8 Dreyer, G., and Hanson, G. F.: The Assessment of Physical Fitness, Lond., 1920.
9 Marine, D., and Kimball, O. P.: The Prevention of Simple Goiter in Man. Jour. Lab. and Clin. Med., iii, 1917. Second paper, Arch. Int. Med., xxii, 41-44, 1918. Third paper, Jour. Am. Med. Assn., lxxiii, 1873-1874, 1919. Fourth paper, Arch. Int. Med., xxv, 661-672, 1920; Jour. Am. Med. Assn., lxxvii, 1068-1070, 1921.
Kimball, O. P.: The Prevention of Simple Goiter in Man. Am. Jour. Med. Sc., clxiii, 634, 1922.
10 Sloan, H. G.: The Use of Iodinized Salt in the Prevention of Goiter. Ohio State Med. Jour., March, 1921.
11 Hayhurst, E. R.: The Present-Day Sources of Common Salt in Relation to Health. Jour. Am. Med. Assn., lxxviii, 18-21, 1922.
12 Goldthwait, J. E.: The Relation of Posture to Human Efficiency and the Influence of Poise upon the Support and Function of the Viscera. Reprint of lecture read at meeting of the Suffolk Dist. Med. Soc., Dec. 2, 1902, and the Am. Orth. Assn., Hartford, Conn., June 14, 15, and 16, 1909; An Anatomic and Mechanistic Conception of Disease. BOSTON MED. AND SURG. JOUR., clxxii, 881-898, 1915.
13 Park, Zingher, and Serota: Active Immunization in Diphtheria. Jour. Am. Med. Assn., lxiii, 859, 1914.
Zingher: Diphtheria Prevention Work in the Public Schools of New York City. Jour. Am. Med. Assn., lxxvii, 835, 1921.
14 Garland, J.: Report on the Recent "Schick Test" Campaign. BOSTON MED. AND SURG. JOUR., clxxxv, 432-434, 1921.
15 Rosenau, M. J.: Preventive Medicine and Hygiene. D. Appleton & Co., New York and London, 1921.

THE YOUNG "CARDIAC CRIPPLE," WITH ESPECIAL REFERENCE TO EX-SOLDIERS.*

BY FRANCIS H. McCRUDDEN, M.D., BOSTON,

Chief of Medical Service, U. S. Public Health Service Hospital No. 36,

AND PAUL D. WHITE, M.D., BOSTON,

Consultant, U. S. Public Health Service Hospital No. 36.

DURING the latter part of the World War effort syndrome, or neuro-circulatory asthenia, became recognized, at least by the cardiovascular experts, as a fairly common form of "Soldiers' Heart." We know that the condition was recognized during our Civil War, then forgotten. Now history is repeating itself. About half the ex-service men sent to the U. S. Veterans' Hospital No. 36 with the diagnosis of "Valvular Heart Disease" or "Myocarditis" show only "Effort Syndrome." Our observations make it highly desirable to call attention to certain diagnostic, therapeutic, and economic aspects of effort syndrome as a very common form of "Civilians' Heart."

---

*Approved by the Surgeon-General, U. S. Public Health Service, and the Director, U. S. Veterans' Bureau.

A tabulation of the diagnoses (Table 1) made at this hospital in the last 100 cases sent here by outside physicians as cases of "Valvular Heart Disease" or "Myocarditis" shows how frequently effort syndrome is mistaken for heart disease.

TABLE 1.

Final Diagnoses in 100 Cases Sent in as "Heart Disease."

	Rheumatic	Syphilitic	Total
Mitral Involvement (chiefly Stenosis)	7	0	7
Aortic Regurgitation	2	4	6
Aortic and Mitral Involvement	16	0	16
Tricuspid Involvement	1		1
Thyroid Heart			1
Congenital Heart			1
Arteriosclerotic Heart			1
Total Heart Disease	26	4	33
Effort Syndrome alone			45
Miscellaneous Conditions (such as premature beats)			22

"Cardiac" Subjective Symptoms. The figures in Table 2 indicate that many of these patients were probably regarded as "Heart Cases" because they had "Cardiac" subjective symptoms. Patients with heart disease are more likely to have all three of these symptoms than are patients with effort syndrome; yet more than half of those with effort syndrome have at least two of the symptoms.

TABLE 2.

Percentage of Patients with "Cardiac" Symptoms.

	Heart Disease Per cent.	Effort Syndrome alone Per cent.	Miscellaneous Conditions Per cent.
Heart pain	82	71	53
Palpitation	73	47	44
Shortness of breath	88	77	44
No cardiac symptoms	6	12	42
One cardiac symptom	3	33	26
Two cardiac symptoms	39	31	16
All three cardiac symptoms	52	24	16
Either one cardiac symptom or none	9	45	88
Either two or three cardiac symptoms	91	55	32

"Effort Syndrome" Signs and Symptoms. Dizzy spells and fainting attacks seem often to be considered evidence of heart disease. Such attacks are not characteristic of the forms of heart disease seen in people under middle age. When associated with certain "nervous" disturbances they are characteristic of effort syndrome (Table 3).

TABLE 3.

Percentage of Cases with symptoms and signs characteristic of "Effort Syndrome."

	Heart Disease Per cent.	Effort Syndrome Per cent.	Miscellaneous Conditions Per cent.
Attacks of dizziness	47	80	23
Fainting spells	21	50	11
"Nervousness"	36	97	25
Very lively knee-jerks	36	87	43
Tremor of extended fingers	36	85	33
None of these symptoms or signs	39	0	45
One of these symptoms or signs	20	3	15
Two of these symptoms or signs	22	17	38
Three of these symptoms or signs	0	25	0
Four of these symptoms or signs	17	42	0
All five of these symptoms or signs	0	14	0
No more than two of these symptoms or signs	80	20	100
Three or more of these symptoms or signs	20	80	0

Tachycardia. The diagnosis of myocarditis is made fairly frequently because of a rapid heart-rate. Our figures indicate that a rapid heart is as common in effort syndrome cases as in heart disease at the time of examination

TABLE 4.

Percentage of Cases with Tachycardia.

Rate	Heart Disease Per cent.	Effort Syndrome Per cent.	Miscellaneous Conditions Per cent.
Above 85	47	50	36
Above 90	39	41	27
Above 100	25	23	19

Arrhythmia. The occurrence of premature beats or of very pronounced respiratory sinus arrhythmia is very frequently responsible for the diagnosis of myocarditis. As a matter of fact, premature beats are as common in patients having no heart disease as in those having heart disease. And marked sinus arrhythmia is more common in cases of effort syndrome than in cases of heart disease: it is, in fact, one very frequent sign of effort syndrome. (Table 5.)

TABLE 5.

Percentage of Cases with Arrhythmia.

	Heart Disease Per cent.	Effort Syndrome Per cent.	Miscellaneous Conditions Per cent.
Marked respiratory Sinus Arrhythmia	40	91	No data
Extrasystoles	6	5	9
Other irregularity	3	0	0

Murmurs. Table 6 emphasizes very strongly what is so widely taught, but not yet fully recognized, that a systolic murmur alone may not mean heart disease.

There are some differences of opinion among experts as to whether or not we can judge from the loudness, duration, or other characteristics of the systolic murmur alone as to the presence or absence of a valvular mitral lesion. In this series, in all the cases of heart disease in which the only murmur was a systolic one, the murmur was loud enough completely to mask the first sound. In none of these cases of effort syndrome or normal heart was a systolic murmur loud enough to mask the first sound heard.

The significance of diastolic murmurs is evident from the fact that ninety percent. of all the heart disease cases, and none of the others, showed such murmurs. This important fact emphasizes how careful we should be not to overlook the mid-diastolic murmur heard in the recumbent position, and often only immediately after exercise, in cases of slight mitral stenosis.

TABLE 6.

Percentage of Cases with Murmurs.

	Heart Disease Per cent.	Effort Syndrome Per cent.	Miscellaneous Conditions Per cent.
Systolic murmur only	10	70	45
Diastolic murmur of some kind—early, middle, or late	90	0	0

Cardiac Enlargement. Table 7 indicates the significance of heart size as shown by percussion and x-ray examination.

TABLE 7.

Percentage of Cases with Evident Cardiac Enlargement.

Heart Disease	59%
Effort Syndrome alone	0
Miscellaneous Conditions	0

History. Table 8 suggests that in doubtful cases without rheumatic or luetic history or positive Wassermann test we should be careful in diagnosing heart disease; and that in cases with rheumatic history we should be careful in ruling out heart disease.

TABLE 8.

Percentage of Cases with "Rheumatic" or "Luetic" History.

	Heart Disease Per cent.	Effort Syndrome Alone Per cent.	Miscellaneous Conditions Per cent.
Rheumatism	61	0	0
Syphilis	10	2	0
Both rheumatism and syphilis	3	0	0
Scarlet fever	3	0	0
Total with rheumatic or luetic history	77	2	0
Neither rheumatic nor luetic history	23	98	100

Examples:—As concrete examples, the chief points from the history, symptoms, and physical findings are recorded in three cases of effort syndrome, and, following these, in three cases of heart disease. It is to be understood that only the essential facts are summarized here; and that, in all cases, infectious diseases, hyperthyroidism, nephritis, and organic nervous diseases have been ruled out.

Case I. *Effort Syndrome.* This man was sent to the hospital with the diagnosis of "Chronic Endocarditis."

He has never had rheumatism, scarlet fever, tonsillitis, or venereal disease; he says he was never ill before he had his present trouble.

While in the army in 1918 he was gassed, and ever since that time he has had dizzy spells, fainting attacks, weakness, and short, stabbing pains around his heart. He is very nervous, so much so that at times he cannot hold a pen in his hand on account of the tremor. He sleeps lightly and the least little thing makes him start.

At the time of examination the patient looks apprehensive; his face is flushed. His knee jerks are very lively. His extended fingers show a marked tremor.

His pulse in the standing position is 130; in the sitting position 106; and in the prone position 86. After 50 hops his face and neck become very flushed; he feels giddy, and falls over.

Auscultation shows a short systolic murmur at the apex, not masking the first sound.

The heart is not enlarged.

Case II. *Effort Syndrome.* This man came to the hospital with the diagnosis of "Valvular Disease of the Heart."

He has never had rheumatism, scarlet fever, tonsillitis, or venereal disease.

His chief troubles are pain around the heart, shortness of breath, general weakness, and—especially when he walks too much—great nervousness. When he lies on his left side, he suffers from palpitation. He has frequent attacks of dizziness. Sometimes when he suddenly rises from a chair, "Everything becomes all blurred" before him. His hands and feet sweat badly; and in winter they are cold and blue. He says he trembles a good deal; any little thing puts him "All in a tremble."

His face is flushed, and he looks apprehensive. His knee jerks are lively; and his extended fingers show a marked coarse tremor. During the whole time of the physical examination he is nervous and fidgety.

His pulse is 104, with marked respiratory sinus arrhythmia.

Auscultation shows a systolic murmur that does not mask the first sound: no diastolic murmur can be brought out.

There is marked breathlessness and flushing after slight exercise.

The heart is not enlarged.

Case III. *Effort Syndrome.* This man was sent to the hospital for "Valvular Heart Disease."

He has never had rheumatism, scarlet fever, tonsillitis, or venereal disease.

He says that he has dizzy spells, and that he gets tired easily. At night his heart at times seems to stop and then begins to beat faster than ever. He gets out of breath easily, and has occasional pains around his heart. He is very nervous; he gets "all nerved up" on the least provocation, and his heart begins to "pound." Simply being called in for physical examination sends his pulse up to 160.

His knee jerks are very lively; and his extended fingers show a marked tremor.

When his pulse is first taken, after he has been sitting quietly long enough to give his story, the rate is 160; by the time the physical examination has been concluded it has fallen to 116. His systolic blood-pressure is 156 at first; a little later

148; and at the conclusion of the physical examination 142 mm.

A short systolic murmur, not masking the first sound, can be heard; but no diastolic murmur can be brought out.

The heart is not enlarged.

CASE IV. *Rheumatic Heart Disease; well marked aortic regurgitation, with moderate degree of mitral stenosis and regurgitation.* This patient has had recurrent attacks of acute inflammatory rheumatism since he was 16 yrs. old (15 years ago).

Since then he has been troubled from time to time with pain around his heart, and occasional attacks of palpitation. He is not especially short of breath unless he hurries; but he gets tired easily. He does not have fainting attacks; and he is not especially nervous. He is up and about.

He looks well enough except that he is rather pale. His knee jerks are not especially lively; and his extended fingers show hardly any tremor.

His pulse is 72, and respiratory sinus arrhythmia is only moderate.

There is a slight enlargement of the area of cardiac dulness. The apex-beat can be seen and felt as a very forcible impulse.

Auscultation at the apex shows a long, rough, rumbling, mid- and late diastolic murmur, with presystolic crescendo accentuation, ending in a thumping first sound. There is also a short blowing systolic murmur at the apex, and a long higher-pitched early diastolic murmur can be heard all over the chest and up into the neck. The murmurs occupy almost the whole period of the cardiac cycle.

Systolic blood-pressure is 160 mm.; diastolic 50. Duroziez' sign is present in the neck.

CASE V. *Rheumatic Heart Disease with marked aortic regurgitation, and slight mitral stenosis and regurgitation.* This man had attacks of rheumatism while in the army four years ago, and less frequently since then.

He says that he gets short of breath after slight exertion, and suffers because his heart "pounds so hard" when he lies down at night. He is not especially nervous. He rarely has pains around his heart. He has never fainted. He has no other complaint, and is up and about.

This man is pale: his lips are slightly bluish; his reflexes are not especially lively; his extended fingers do not tremble.

His pulse is 72; and respiratory sinus arrhythmia is moderate. The pulse is of the Corrigan type; capillary pulsation is marked.

The apex beat is forcible. A loud blowing murmur, early diastolic in time, can be heard all over the precordia; but it is loudest along the left border of the sternum and just to the right of the upper end of the sternum. A late diastolic murmur with presystolic accentuation can be heard at the apex. A systolic murmur can be heard all over the precordia.

X-ray examination shows "enlargement of the left auricle."

The systolic blood-pressure is 162 mm.; diastolic 20.

CASE VI. *Rheumatic Heart Disease, with mitral stenosis.* This patient has had recurrent attacks of acute inflammatory rheumatism for the past eight years.

He complains of a dull aching pain near his heart which, from time to time, becomes a sharp shooting pain. When he walks uphill, he gets a choking feeling in his neck and chest. He is easily short of breath. He never has palpitation, and never faints. He is not nervous or excitable. He is up and about, and fairly active, and has no other complaints.

This man looks well enough. His color is good. His reflexes are not especially active and his extended fingers show very little tremor.

His pulse is 68; there is no respiratory sinus arrhythmia.

A long blowing systolic murmur can be heard all over the precordia. In the recumbent position a late diastolic murmur can be heard. After exercise the diastolic murmur becomes more evident and shows well marked presystolic accentuation, and a presystolic thrill can be felt.

The heart shows enlargement.

Effort Syndrome and Heart Disease contrasted. In even the most hasty glance over these few sketchy excerpts from the case histories the reader will be struck by the contrast between the *marked and varied subjective symptoms* associated with *few or no physical signs* of cardiac pathology which characterize effort syndrome on the one hand, and the *few definite subjective symptoms* associated with *marked physical signs* of cardiac pathology which characterize the cases of heart disease. Heart disease severe enough to account for the marked and many subjective symptoms of these effort syndrome cases would be accompanied by numerous and very obvious characteristic physical signs.

Differential Diagnosis. Our observations indicate the comparative unimportance of "cardiac" subjective symptoms, systolic murmurs alone, tachycardia, and certain forms of arrhythmia. They emphasize the importance of diastolic murmurs, cardiac enlargement, and rheumatic history as presumptive evidence in favor of heart disease; and the importance of the absence of these three facts and the presence of certain "nervous" symptoms as presumptive evidence in favor of effort syndrome.

A patient may have both heart disease and effort syndrome at the same time; two of our cases showed both. This is very important to remember. In such cases it is often difficult to judge the influence of each of the two factors in the production of the symptoms.

Long Hospitalization. When a patient with effort syndrome only is sent to the hospital labeled "Heart Disease," the responsibility of proving that this patient has no heart disease, or any other disease, rests on the hospital doctor who, in view of the striking subjective symptoms, and the diagnosis already made, is inclined to exaggerate the significance of any objective findings, no matter how slight, that may be considered abnormal, and to delay accepting the responsibility for stating "Diagnosis not concurred in; no disease found" until he has made repeated, varied, and time-consuming tests and observations to back up his opinion. And this is not the end, for the patient turns up again with essentially the same condition, but with his story presented in somewhat different form; and some other physician in the same, or perhaps another, hospital puts him through another long period of hospitalization. In the cases cited here as examples the average total time spent in the hospital during the past two years was well over 200 days; and this is probably a fair average.

The Bad Effect of Long Hospitalization. As to the bad effect of long hospitalization on effort syndrome cases we concur fully in the opinion expressed by Lewis* who says (p. 110)

> "The bed treatment of cases showing effort syndrome is deplorable. The patients deteriorate in health; they become undisciplined, and hospitalized; it becomes ever more difficult to disabuse them of the notion that their hearts are diseased. The inevitable tendency of bed treatment is to exaggerate the complaints, and to render them more persistent."

Our experience indicates that the best treatment of these patients with effort syndrome is: (1) to admit that their symptoms are real, (2) to insist that these symptoms are not serious and to reassure them about their hearts, and (3) to get them back soon to some kind of interesting work which is "within their symptoms." Many of them gradually outgrow much of their effort syndrome.

The Economic Aspect. The financial cost to individuals and to the community as a whole in the failure to recognize effort syndrome and not heart disease as the cause of the symptoms in about half the cases of supposed heart disease, and the unnecessary hospitalization of these cases of effort syndrome, is a serious economic loss.

---

*Lewis, Thomas: The Soldier's Heart and Effort Syndrome. Hoeber, New York, 1919.

◆

A PLEA FOR TESTING SELECTED SINGLE SPECIMENS OF URINE, WITH SPECIAL REGARD TO DIABETES.

BY HORACE GRAY, M.D., BOSTON.

[From the New England Deaconess Hospital.]

Earlier Diagnosis.—While new devices are more fascinating to patients, the profession and particularly the inventor, the oldest methods are hard to surpass in reliability and simplicity. Among these are the time-honored tests for albumin and sugar in the urine, which in frequency of use remain unrivalled by a single one of our modern methods. The aim of this paper is to convince the physician that urinanalysis is not telling him all it might, unless attention is paid to the hour at which the specimen is secured.

Hyperglycemia, Glycosuria, and Glycuresis.—Even in the best equipped clinics the urinary sugar is the practical guide to everyday treatment, while the blood sugar is the theoretical and ideal guide. This is renounced with children under about six years, is discounted with diabetics of long duration or with those who have nephritis, and of necessity frequently omitted with patients following discharge from hospital. In general practice this is true to a far greater extent because the inconvenience of securing the blood and the expense of the test are additional deterrent factors.

"Practically Sugar Free."—It is not uncommon to reproach the clinician who sees many cases of diabetes with making the diagnosis on the "insufficient" ground of a very small quantity of sugar in the urine. This would appear the case from the following quotation from a well known and respected writer: "Had these particular samples (containing 0.6 to 0.4 per cent.) happened to be examined by a clinician the conclusion would probably have been drawn that the subject was a diabetic. Almost certainly life insurance would have been refused as a result of such an examination, yet the subject has apparently no diabetic tendency. For the clinician to find such a tendency would simply require a combination of circumstances by which the urine sample should be collected within 2 hours after a breakfast unusually rich in carbohydrate. Probably not infrequently individuals are rejected for life insurance owing to such a combination of circumstances. An accurate quantitative determination for a 24-hour sample on the ordinary diet would correct the error."[1]

While the last sentence cited may eventually prove correct, the rest of the quotation cannot be admitted without the following protests from the clinical side:

1. Little or no evidence has been published to prove that persons with glycosuria in single specimens sufficient to be measured with the convenient and much-used Benedict's quantitative test fail to develop diabetes in the course of years.
2. An occasional patient is described as having been permitted to run a glycosuria for some years without developing any diabetic accident, but that patient will generally be found (1) to have so far escaped complications owing to having somewhat restricted his diet; or (2) unless adequate restrictions be introduced to come later to grief; or (3) rarely to show by a normal blood sugar persisting for a decade that he is one of those mysterious instances of renal glycosuria.
3. On the other hand, abundant evidence has been printed proving that persons with trivial percentages of sugar, discovered in single specimens at insurance or other routine examinations, who have continued to eat improperly eventually come to hospital because of a diabetic complication, not to say catastrophe: car-

buncle, gangrene, or coma. Unfortunately, the very mildness of these cases at onset results in a considerable latent period, commonly as much as ten years, during which the patient has often passed out of the sight of the first physician, who therefore fails to realize the harm done by originally telling a patient that he had "practically no sugar." This agreeable reassurance, "only a trace of sugar," however, is firmly believed in this clinic to indicate lack of appreciation of the menace to the patient of neglected glycosuria, however mild.

For example: Cantani,[2] 50 years ago, declared that all cases of intermittent or periodic glycosuria, while apparently only transient, form indubitably the début of diabetes and indicate at the least a great predisposition, which is likely to progress fatally unless the conditions of life become again favorable to the organism.

Barringer and Roper[3] have shown that many such patients showing small quantities of sugar later developed frank diabetes. Joslin[4] has reported that in a series of 300 diabetics seen by him as many as 13 per cent. owed detection to insurance examination at a time when they believed themselves to be in perfect health.

In doubtful cases, therefore, early tentative diagnosis and enough dietary restriction to reduce weight have not been shown to be otherwise than beneficial, whereas numberless severe diabetics are seen in practice, who months or years before, when presumably still mild and, therefore, in many instances at least manageable, were reassured and condemned with that dangerous dictum, "practically no sugar." It is much wiser to act on the principle that anybody exhibiting sugar in a 24-hour collection amounting to a normal volume, say one liter or over, shall be suspected of diabetes, and properly watched for life.

The micro-quantitation of sugar in the 24-hour urine by the method of Benedict[5] or of Folin,[6] is believed by some clinicians to be more reliable than the blood sugar, but few have used it sufficiently to hazard an opinion, and the contention certainly requires further proof.

The accurate and serviceable blood sugar methods of Bang,[7] of Benedict,[8] and of Folin[9] are gratefully accepted by clinicians sensitive to the danger of small quantities of urinary sugar as a means of confirming the threat of glycosuria; or in exceptional cases, such as these with obesity or with low thresholds, as a means of demonstrating both immediately and later that these patients are remaining in a safe condition.

Random Specimens.—The great majority of diagnostic specimens (urinary or otherwise) are secured at the first visit in the home or the office. Such a sample, fortuitously taken without regard to hour or previous meal, is a necessary beginning, but too often is also considered final. This may indeed be unavoidable, as when the disease is acute or when the patient lives far away; and it may, too, be fairly conclusive, as in the case of blood counts, smears, cultures, Wassermann, nonprotein nitrogen, and Widal tests. On the other hand, think of the cases in which, without hesitation, we require the patient to take considerable trouble to provide other diagnostic data, *e.g.*, a gastric test meal, a blood sugar before breakfast, an x-ray examination, or a collection of the twenty-four hour urine, not to mention consultation with other physicians. Ought we not then to insist more frequently on special single specimens of urine, provided these can be shown to promise additional information. The attempt follows to show this convincingly.

Albumin—To begin with, our theme may be narrowed by dismission of albumin with the statement that authors agree that when present at all it is apt to be most abundant after the patient has been active. It is often missed early in the day, especially in the rising specimen so generally presented by the patient as being what he thought the doctor would prefer. The chief use of this specimen, in the writer's judgment is to establish the orthostatic nature of an albuminuria which has been found at other times of day.

Casts.—Formed elements likewise are most often demonstrable in a fresh sample after exercise, say in the late afternoon. For another reason they are more often found in such a specimen than in a 24-hour collection, namely because the latter seldom reaches the laboratory in fresh condition. Preservatives may doubtless be put in the collecting vessel to be used by the patient, but are such a nuisance that their use is infrequent. Furthermore, a chemical (xylol, at least) often does not prevent total decomposition of casts in 24-hour amounts obtained from diabetics, while single samples show showers of casts. What causes this rapid dissolution in diabetic urines we cannot at present say.

Sugar—Inferiority of Percentage to Grams per Twenty-Four Hours—Seventy years ago Traube[10] emphasized the untrustworthiness of passing judgment on the percentage of sugar in a chance sample of urine and hence the necessity of quantitating the total grams excreted in the entire 24 hours. This doctrine has been accepted in the most authoritative monographs ever since, apparently on the assumption that the moment of glycosuria in the 24 hours is so uncertain that the careful physician can best make sure of catching that moment by demanding the entire volume. There is truth in this, but in the present paper the plea is urged that real regard be paid to the fact that frequently a diabetic shows in the whole amount *no* qualitative test, but in a selected single specimen a quantitable amount of sugar, which we have found as large as 3.0 per cent.

Intensity, or Grams per Hour.—The inconvenience of the total collection has been admitted from Traube in 1852 to Graham in 1921.[11] The former also pointed out another objection, to wit, lack of knowledge about the contemporaneous diet (in grams of carbohydrate, protein and fat) of a patient up and about at work. To meet both these disadvantages he proposed the determination of the intensity of the glycosuria by saving every sample of urine and finding the amount of sugar excreted in grams per hour. This principle has been utilized by remarkably few.

Futility of the Fasting Specimen.—In mild cases the urine before breakfast was found sugar free by Traube when the day urine contained sugar. In such cases he rendered a favorable prognosis. His authority has been responsible for a following as extensive as it has in this respect been lamentable. Multitudes have been deluded. The damage done must have been all the greater since Külz and others[12] have warned us that sugar-freedom on rising is by no means seldom in severe as well as mild diabetics. Use of this specimen has been deprecated by many writers since Seegen in 1870.[13]

Worth of Specimens Selected at Special Times.—The night collection may show more marked glycosuria than the day amount, as seen to the incredibly large extent of 62 per cent. of the cases reported by Koch[14] and as occasionally noted by others,[15] including the present study. This observation has been of little practical service. This entire night amount must not be confused with the rising specimen, which though frequently called the night specimen generally covers a period beginning only after bedtime, by which hour any glycosuria due to supper is apt to be finished. Indeed Külz and Rumpf observed that at times the night urine may be sugar free, yet the specimen passed on waking may show sugar, though nothing be eaten during the night.

Post-Prandial Glycosuria.—Increased sugar excretion after meals has been emphasized successively by a number of writers.[16] The particular period advocated for getting the urine sample is of interest. One hour after eating was favored by Bouchardat and by Kleen, and one to two hours by the majority. Longer periods have appealed to a few, *e.g.*, between two and three hours, Seegen, Hamman, Macleod, apparently three to four hours by life insurance examiners, and four to six hours by Emerson. Theoretically these larger intervals are not dependable since sugar may be missed either because an intervening one or two-hour specimen is inadvertently thrown away by the subject or because the sugar is excreted in such small amount as to be diluted by the larger volume of urine represented by a four-hour collection, and so fail to react to the ordinary qualitative test. Practical proof of the inferiority of intervals longer than two hours is scarce but may be inferred from Külz and Rumpf's observation that in the first two hours after eating the sugar excreted amounted to 49 per cent. of the total excretion, and also from the following averages which I have made from figures published by Barringer and Roper:

Hours after 100 g. sugar intake.	No. of cases.	Average % urine sugar.
1	8	0.20
2	9	0.25
3	8	0.15
4	10	0.14

From these calculations we see again that the greatest glycosuria (unfortunately grams are not given) occurred within two hours after eating, but considerably less in the samples at three and four hours. Later Sakaguchi reported an illuminating diabetic case (K. S.) whose urine was tested 12 times, both two and four hours after a meal; the latter group of samples were all sugar free, while in the former group of twelve samples seven showed sugar. The above findings support the assertion upheld in this paper that samples more than two hours after a meal are misleading if one desires to detect glycosuria in its incipiency. It must be admitted, however, that occasionally one is surprised to find no glycosuria at the end of one and two hours after a meal, yet a considerable amount of sugar in the three-hour sample. This exceptional lag is explicable by Sakaguchi's remark that if the urine and blood be examined at short intervals, not infrequently alterations in the urine sugar appear somewhat later than those in the blood sugar, because a part of the urine remains in the tubules, renal pelves, ureters and bladder. The influence of this residual urine on the sugar content of the next urine specimen becomes then especially large if that specimen be small or if the ingested carbohydrate be particularly in excess of tolerance. Another plausible reason is suggested by the work of Beeler, Bryan, Cathcart and Fitz,[17] who have demonstrated the delay which may ensue in the gastric absorption of even pure glucose given by mouth.

ALL SPECIMENS SAVED SEPARATELY FOR 24 HOURS.

The intensity of glycosuria in grams per hour as determined from single samples collected throughout the 24 hours, occurred to the writer as of probable importance. Search of the literature revealed that already 70 years ago this precept was proposed and proved by Moritz Traube. Then the examination of every single specimen over enough days to indicate the slope of the curve of intensity during the 24 hours was counselled by Posner and Epenstein. This method convinced them that one case thought mild because several rising specimens were sugar-free and because 24 collections contained less than 1.0 per cent. or 15 grams per 24 hours, *i.e.*, 0.6 grams per hour, was really by no means mild since separate samples showed as much as 3.0 per cent., or an intensity of 8.3 grams per hour; and this conviction was confirmed in time by progression to an output of 80 grams in 24 hours and the loss of a leg from diabetic gangrene. These writers also noted repeatedly two peaks of glycosuria (in percentage, in grams and in intensity alike) per day, one after breakfast and one in the evening (this last had been reported by Rosenstein in 1857), and pointed out in one case that a sample more than two hours after eating failed to reveal so high a sugar output as an earlier sample. Linden went so far as to assert: "Both for qualitative examinations and for diet regulation the 24-hour amount is to be rejected in favor of the single specimens."

Fixation of the intensity of glycosuria through the several specimens indicates severity of the disease, according to Seegen, and this interpretation seems plausible by analogy with the more recently known diminishing variation of specific gravity in advancing nephritis. Even if this convenient rule be true in general, there are exceptions. Witness case No. J. 2626, whose glycosuria for three weeks varied only from 1.1 to 1.7 per cent., yet his case is not severe but rather of long duration. Here the fixation may be akin to an inveterate edema.

Others who have mentioned the examination of four or more portions in the 24-hour cycle have been relatively few, and have made little effort to popularize this method of study.[18]

Larger excretion of sugar in the specimen passed during the night or on rising, as compared with the day, is when present probably due to (1) excessive carbohydrate in the evening meal, coupled with ensuing physical rest, or (2) unusual severity of the disease, as in several examples which have passed under our notice (Nos. J. 1889, 1895, 2256, 2687, 2729).

NEW DATA.

In Dr. Joslin's clinic we have been interested in carrying out the prescription of preserving every single specimen. We have aimed at greater precision by studying mainly men, who drink and pass more than women, and thus we have been able in many instances to secure samples every two hours while the patient was awake, and very often a sample around dawn.

Incidentally the specific gravity on these fractions gave us information as to renal function, according to the well known views of Schlayer,[19] Mosenthal,[20] Christian,[21] and O'Hare.[22]

The number of patients studied in this laborious manner is not yet great enough to furnish statistical material, hence it must suffice to abstract in Table 1 the significant findings, which corroborate once more the observations made by others—but hitherto neglected.

The notable facts in the table are:

1. Case J. 1889, who had only 8 grams in the 24-hour amount, that is 0.3 g/h, showed in the specimen one hour after supper 1.7 g/h, *i.e.*, six times as much.
2. In each of the other nine 24-hour cycles, the total amount was sugar free by Benedict's qualitative test, but one or more single specimens reacted positively, and on quantitation showed 0.1 or 0.2 g/h.
3. The variation in the amount of glycosuria is no doubt due in part to variation in the amount of carbohydrate and perhaps protein and fat of the preceding meal. Show of sugar after breakfast alone, as in lines 4 and 7, has been reported by Benedict, Osterberg and Neuwirth, also by Sakaguchi. Show of sugar after lunch alone, as in lines 2, 3, and 8, has been reported by Joslin. But on the whole, like Cantani, Henrichs and Külz-Rumpf, I have been unable to establish an absolutely fixed rule

Uncertainty of the Hour at which Glycosuria may Occur.

	Case no.	G/24h.	G. per hour.															Conclusion as to hour of show of sugar.
1	J.1889	8	0	0	0		0	0.3			0.1	1.7		1.5		0.6	0	Most after supper & through ev'g.
2	J.1889 another day	0	0	0	0	0	0	0.2			0			0	0	0	0	After lunch.
3	J.2508	0			0	0		0.1		0.1			0	0			0	After lunch.
4	J.1859	0	0		0.1	0			0	0			0	0			0	After breakfast.
5	J.1859 another day	0	0		0	0	0		0	0			0	0		0.1		At dawn.
6	J.2152	0	0		0		0	0	0		0	0	0			0.1		At dawn.
7	J.1500	0	0		0.1		0	0	0		0	0	0			0		After breakfast.
8	J.1500 another day	0	0		0		0	0	0.1		0		0			0		After lunch.
9	J.1500 a third day	0	0		0	0		0	0	0	0		0.2				0.2	After supper & at dawn.
10	J.2652	0	0		0	0			0	0		0	0.2	0			0	After supper.

as to the hours at which the urine is eliminated in the largest amounts, or in greatest density or most heavily charged with sugar. From the academic viewpoint, however, it is interesting to remember that sugar appears most readily after breakfast, when the three meals are equal, as shown independently by Naunyn, Sakaguchi, and Mosenthal. But in practice the three meals are seldom equal. In fact, in this clinic previous studies have led us to take particular pains to plan breakfasts containing only about one-fourth to one-fifth of the day's allowance of carbohydrate and calories. Under such a schedule any glycosuria is most apt to be precipitated by supper, and least of all by the midday meal, because as already remarked, it is in most persons both a light meal and is followed by physical activity.

4. Importance of keeping the urine sugar free continuously. This doctrine has been emphasized by a number of writers: Klemperer,[23] Allen,[24] Watanabe and Sakaguchi.[25] Whether the blood sugar also should be depressed forcibly to normal as advocated by Weiland,[26] Macleod, Tachau,[27] Williams and Humphreys,[28] and particularly by Allen, cannot be discussed here. But surely not only the 24-hour amount should be sugar free, but also all fractions, as practised by Allen, Stillman, and Fitz. They used, however, four 6-hour collections, whereas the new evidence presented indicates the greater delicacy as well as the greater ease of using postprandial single samples.

SUMMARY.

Albumin, casts, and sugar are overlooked frequently when the physician examines a random sample of urine and, furthermore, even in the twenty-four hour amount. Regarding glycosuria in particular, we have been increasingly impressed with the frequency of negative twenty-four hour amounts when picked samples are strongly positive. Dilution is a dangerous mask. By testing separate voidings one can assure that more complete sugar-freedom which is the obvious desideratum.

Hence the best method alike for early diagnosis, for treatment, and for the doctor's periodic study, is to test every single specimen throughout twenty-four hours. Intermittent glycosuria often occurs at unexpected hours. Casts also are far more constantly found in fresh single specimens than in twenty-four hour specimens, particularly in diabetic urines.

When it is impracticable for the physician to study every sample, it is desirable to investigate a specimen one hour after a hearty meal.

The patient, on the other hand, while he should be exhorted to test his urine with Benedict solution daily, should not be permitted to make more than one test a day, lest he become, as we have repeatedly noticed with regret, hypochondriac. At the same time a test about an hour after supper is apt to be adhered to by a patient working away from home, long after he has tired of saving the twenty-four hour amount.

For patients about to take insulin, single specimens seem specially appropriate to guide the balancing of the dosage against the diet desired.

REFERENCES.

1 Benedict, S. R., Osterberg, E., and Neuwirth, I.: Jour. Biol. Chem., 34: 232, April, 1918.
2 Cantani, A.: Le diabete sucré. Lectures given in 1872, transl. by Charvet, H. Paris, 1876.
Cantani, A.: Ueber den diabetischen Blutzucker. Untersuchungen zur Naturlehre, ed. Moleschott. J. 11: 443, 1876.
3 Barringer, T. B., and Roper, J. C.: Am. J. M. Sci., 133: 842 June, 1907.
4 Joslin, E. P.: Proc. Assn. Life Ins. Directors of America, 32nd Meeting, Oct., 1921, Transactions, 8: 87, 1922.
5 Benedict, S. R.. and Osterberg, E.: Jour. Biol. Chem., 34:195, April, 1918.
6 Folin, O., and Berglund, H.: Jour. Biol. Chem., 51: 209, March 1, 1922.
7 Bang, I.: Der Blutzucker, Wiesbaden, ed. 1, 1913.
Bang, I.: Mikromethoden zur Blutuntersuchung, München, ed. 2, 1920.
8 Lewis, R. C., and Benedict, S. R.: Proc. Soc. Exper. Biol. and Med., 11: 57, Dec. 17, 1913.
Lewis, R. C., and Benedict, S. R.: Jour. Biol. Chem., 20:61, 1915.
Benedict, S. R.: Jour. Biol. Chem., 34: 203, April, 1918.
9 Folin, O., and Wu, H.: Jour. Biol. Chem., 38: 81, March, 1919.
Folin, O., and Wu, H.: Jour. Biol. Chem., 41: 367, Jan., 1920
10 Traube, M.: Arch. f. path. Anat., 4: 109, 1852.
11 Graham, G.: Lancet, 1: 1063, May 21, 1921.
12 Külz, E.: Klinische Erfahrungen über Diabetes Mellitus, ed. by Rumpf, T., Aldehoff, G., and Sandmeyer, W., Jena, p. 312, 1899.
13 Seegen, J.: Der Diabetes Mellitus, ed. 1, Leipzig, 1870, p. 77; ed. 2, Berlin, 1875; ed. 3, Berlin, 1893, p. 131.
14 Koch, E.: Inaugural-Dissertation, Jena, 1867; cited by Naunyn, B.: Der Diabetes Mellitus, Vienna, ed. 2, 1906, p. 166.
15 Bouchardat, A.: Compt. Rend. Acad. Sci., Paris, 13: 942, Nov. 15, 1841, and Annuaire de thérapeutique, Paris, 1841, p. 165, 189, 221.
Leube, W.: Deutsch. Arch. f. klin. Med., 5: 372, March 25, 1869.
Cantani, A.: loc. cit.
Schmitz, R.: Deutsch. med. Wchnschr., 7: 645, Nov. 26, 1881.
Külz, E., and Rumpf, T.: loc. cit.
Cammidge, P. J.: Glycosuria and Allied Conditions. New York, 1913.
Benedict, S. R., Osterberg, E., and Neuwirth, I.: loc. cit.
16 Bouchardat, A.: loc. cit.
Vogt: Zts. f. rationelle Medicin, 1:147, 1844.
Rosenstein, S.: Arch. f. path. Anat., 12: 414, Oct., 1857.
Pavy, F. W.: Researches on the Nature and Treatment of Diabetes, London, 1862.
Fagge, H.: Guy's Hosp. Rep., 20: 174, 1875.
Cantani: loc. cit.
Schmitz: loc. cit.
Posner, C.: Verh. d. Cong. f. inn. M., 10: 471, April 9, 1891.
Posner, C., and Epenstein, H.: Berliner klin. Wchnschr., 28: 649, June 28, 1891.
Breul, L.: Arch. f. exper. Path., 40: 1, Oct. 28, 1897.
Schupfer, F.: Bull. della Soc. lancisiana degli ospedali di Roma, 17: 316, July 17, 1897; abst. Centralbl. f. inn. Med., 19: 730, July 16, 1898.
Klemperer, G.: International Clinics, Series 7, 4: 72, 1898.
Pavy, F. W.: Differentiation in Diabetes, Lancet, June 16, 23, 30, 1900.
Kleen, E.: On Diabetes Mellitus and Glycosuria, Philadelphia, 1900, p. 39.
Mering, J. von: Diabetes Mellitus, Juckerharnruhr, Lehrbuch der inneren Medizin, Jena, ed. 1, 983, 1901.
Linden van den Heuvell, H. L. van, and Facée-Schaeffer, N. J. M.: Nederl. Tijdschr. V. Geneesk., 2: 428, Aug. 15, 1903.
Naunyn, B.: Der Diabetes Mellitus, Wien, ed. 2, 1906, p. 165.
Barringer, T. B., and Roper, J. C.: Am. Jour. Med. Sci., 133: 843, June, 1907.
Lépine, R.: Le diabete sucré, Paris, 1909, p. 467.
Knerr, E. B.: Missouri State Med. Assn. Jour., 10: 137, Oct., 1913; 12: 71, Feb., 1915.
Cammidge, P. J.: Glycosuria and Allied Conditions, New York, 1913, p. 180.
Kraus, F.: Diabetes Mellitus. J. von Mering's Lehrbuch der inneren Medizin, Jena, ed. 8, 1: 799, 1913.
Kraus, F.: Diabetes Mellitus, J. von Mering's Lehrbuch der inneren Medizin, ed. Krehl, L., Jena, ed. 12, 2: 189, 1920.
Macleod, J. J. R.: Jour. Am. Med. Assn., 62: 1222, April 18, 1914.
Benedict, Osterberg, and Neuwirth: loc. cit.
Sakaguchi, K.: Mitt. d. med. Fakultät d. kaiserlich Univ. zu Tokyo, 20: 481, Dec. 28, 1918.
Hamman, L.: Canadian Med. Assn. Jour., 9: 961, Nov., 1919; also Discussion of Joslin's paper: South. Med. Jour., 15: 102, Feb., 1922.

Allen, F. M., Stillman, E., and Fitz, R.: Total Dietary Regulation in the Treatment of Diabetes, New York, 1919, p. 87.
Kast, L., Wardell, E. L., and Myers, V. C.: Am. Jour. Med. Sci., 160:877, Dec., 1920.
Williamson, R. T.: Lancet, 1:708, March 27, 1920.
Graham: loc. cit.
Mann, R. W.: Canadian Med. Assn. Jour., 11:243, April, 1921.
Emerson, C. P.: Clinical Diagnosis, Philadelphia, ed. 5, 1921, p. 200.
Macleod, J. J. R.: Canadian Med. Assn. Jour., 12:4, Jan., 1922.
17 Beeler, C., Bryan, A. W., Cathcart, E. P., and Fitz, R.: Jour. Metab. Research, 1:549, April, 1922.
18 Pavy, F. W.: Guy's Hosp. Rep., 7:345, 1861.
Gaethgens, C.: Ueber den Stoffwechsel eines Diabetikers verglichen mit dem eines Gesunden, Inaug.-Diss., Dorpat, 1866.
Cantani: loc. cit., p. 132.
Seegen: loc. cit.
Külz, E.: Beiträge zur Pathologie und Therapie des Diabetes Mellitus, Marburg, 1874.
Fagge: loc. cit., p. 183.
Henrichs, H.: Ueber die behandlung des Diabetes Mellitus mit Syzygium Jambulanum, Inaug.-Diss., Giessen, 1891.
Achard, C., Weil, E.: Bull. et mem. Soc. med. Hop. de Par., 15:149, Feb. 18, 1898.
Bogoras, S.: Zur Kenntniss der Zuckerkrankheit im Kindesalter, Inaug.-Diss., Berlin, Aug. 4, 1899.
Strauss, J.: Ztschr. f. klin. Med., 39:202, 1900.
Kleen: loc. cit.
Weyde, A. J. van der: Nederl. Tijdschr. voor Geneesk., 2: 532, Aug. 22, 1903.
Stäubli, C.: Deutsch. Arch. f. kl. M., 93:107, April 24, 1908.
Siebke: Deutsch. med. Wchnschr., 36:1031, June 2, 1910.
Novak, J., Porges, O., and Strisower, R.: Ztschr. f. klin. Med., 78:413, 1913.
Macleod: loc. cit.
Knerr: loc. cit.
Geyelin, H. R.: Arch. Int. Med., 16:975, Dec., 1915.
Lewis, D. S., and Mosenthal, H. O.: Bull. Johns Hopkins Hosp., 27:133, May, 1916.
Richardière, H., and Sicard, J. A.: Diabète, in Maladies de la Nutrition, in Nouveau Traité de Médecine, ed. Brouardel, Gilbert, A., Thoinot, and Carnot, P. Paris, 12:155, 1917.
Mosenthal, H. O., Clausen, S. W., and Hiller, A.: Arch. Int. Med., 21:93, Jan., 1918.
Allen, Stillman, and Fitz: loc. cit.
Faber, K., and Norgaard: Proc. 9th Northern Cong. f. Int. Med. in Aug., 1919, published Acta med. Scand., 53:666, Jan., 1921.
Hamman: loc. cit.
19 Hedinger and Schlayer, K. R.: Deutsch. Arch. f. klin. Med., 114:120, 1914.
Schlayer, K. R., and Beckmann: Munch. med. Woch., 65:92, Jan. 22, 1918.
20 Mosenthal, H. O.: Arch. Int. Med., 16:733, Nov., 1915; and 22:770, Dec., 1918.
21 Christian, H. A., Frothingham, C., O'Hare, J. P., and Woods, A. C.: Am. Jour. Med. Sci., 150:655, Nov., 1915.
Christian, H. A.: Arch. Int. Med., 18:429, Oct., 1916.
22 O'Hare, J. P: Arch. Int. Med., 17:711, June, 1916.
23 Klemperer, G.: Wien. med. Bl., 15:438 and 472, July 14 and 28, 1892.
24 Allen, F. M.: Glycosuria and Diabetes, Harvard University Press, Cambridge, 1913.
25 Watanabe, R., and Sakaguchi, K.: Mitt. d. med. Fakultät der kaiserlich Univ. zu Tokyo, 13:99, 1914.
26 Weiland, W.: Ztschr. f. exper. Path., 12:116, Nov. 19, 1912.
27 Tachau, H.: Deutsch. Arch. f. klin. Med., 109:569, Feb. 18, 1913.
28 Williams, J. R., and Humphreys, E. M.: Arch. Int. Med,, 23:537, May, 1919.

Current Literature Department.

ABSTRACTORS.

Gerardo M. Balboni
Wm. B. Breed
Laurence D. Chapin
Austin W. Cheever
Isador Coriat
Ernest M. Daland
Horace Gray
Robert M. Green
John B. Hawes, 2d
John S. Hodgson
Fred S. Hopkins
Chester M. Jones
Charles H. Lawrence
Herman A. Osgood
Francis W. Palfrey
Edward H. Risley
William M. Shedden
George G. Smith
John B. Swift, Jr.
Wilder Tileston
Bryant D. Wetherell

Relapsing Fever in Bombay.

Mehta (*Ind. Med. Gazette*, Dec., 1922) reports 23 cases of relapsing fever occurring in the spring of 1922 in Bhavnagar, a port in the Bombay presidency, India. The important symptoms observed were dullness, apathy, headache, delirium, remittent fever, thirst, enlarged and tender liver and spleen, hepatic pain and jaundice. The first attack lasted 7 to 10 days, the first apyretic period 2 to 7 days, the first relapse 3 to 8 days. In none of the cases did a second relapse take place. The crisis was attended with profuse perspiration, and in some cases collapse. Extreme weakness followed the attack, but convalescence was short. All cases were confirmed by blood examination, the spirochaetes being abundant in all but one case. Four of the twenty-three patients died; all four had severe jaundice, acute pain in the hepatic region, delirium, and a rapid, feeble heart. One patient had difficult deglutition before death.

The writer believes that there must have been many other cases of relapsing fever in this locality at this time, and that they were mistaken for malaria, typhoid, pneumonia, and other concurrent fevers. He insists upon the importance of microscopic examination of the blood in all fevers, asserting that if the blood had not been examined in these cases here reported, the entire epidemic would have passed without detection. [L. D. C.]

The Pharmacological Action of Khesari Amine.

Acton and Chopra (*Ind. Med. Gazette*, Nov., 1922) report on a study of the production and pharmacological action of khesari amine. In a previous paper one of the writers showed that the cause of lathyrism in man was probably one of the simpler vegetable protein bases (amines) produced by enzyme action during germination. Their recent experiments show that khesari dâl, as sold in the bazaar, contains two kinds of seeds as regards their germinating properties: from 25 to 50 per cent. germinate, the rest fail to sprout. The germinating processes increase the total amount of amine in the grain, explaining the frequency of lathyrism during the monsoon. The toxic principle resides in the non-volatile amines, which are soluble in water. The main pharmacological effect of the non-volatile amines is slight vasoconstriction. Large doses of non-volatile amines are required to reproduce the disease in animals, indicating a difference in susceptibility. Man, although probably more susceptible than most animals, requires large doses; it is during famine years, when the bondmen eat an exclusive vetch diet, that lathyrism is most frequent. In man the lesions are permanent, indicating destruction of the tracts of the cord; in animals the disease is transient and soon passes off, suggesting ischaemia and interference with function rather than permanent destruction. [L. D. C.]

Treatment of Syphilis Among the Insane.

Dr. Christian (*Am. Jour. Med. Sci.*, Vol. clxiv, No. 4. Oct., 1922) gives a thorough review of the method of treatment of syphilis among the insane at the State Hospital at Morris Plains, New Jersey, citing a number of cases. Although many cases coming to this hospital are recognized too late for curative treatment, they are treated to check onward progress of the disease. He believes that if more examinations of the spinal fluid were made in general hospitals and private practice, many cases would probably never reach institutions for the insane. (With this thought, should go the importance of intensive treatment of early cases of infection.—Editor.) The activity of a syphilitic process in the central nervous system is shown earlier, more accurately, and a number of times only by pathological changes in the spinal fluid, and the activity of syphilis of the nervous system is indicated by the globulin test, cell count, Wassermann and colloidal gold reactions, long before mental symptoms or physical signs are present. Spinal fluid examinations would discover many slow progressing cases of neurosyphilis, and should be used more frequently.

In summarizing, the author says in part:

Our results obtained from treating the syphilitic insane have more than compensated for the time and expense, and it is our plan to continue treatments.

It is a matter of individual opinion whether cases of general paralysis confined in institutions for the insane should or should not be treated. We have found no results obtained in such cases.

Every case in or out of an institution should have a spinal fluid examination if the blood is positive.

Among 1500 cases examined for syphilis 12.5 per cent. showed positive Wassermanns, and from this number of positive cases 26.2 per cent. showed signs of neurosyphilis: 17.6 per cent. being cases of general paralysis and 8.6 per cent. other forms of neurosyphilis. It is to be remembered that the above examinations show the results from latent syphilis, as no case recorded in the above shows clinical signs of syphilis excepting the cases of paresis, and they, of course, belong in the tertiary stage as neurosyphilis.

In conclusion, I wish to emphasize the tremendous importance of the early discovery and proper treatment of syphilis and the examination of the spinal fluids, and thus to lessen the number of incurable latent syphilitics and neurosyphilitics.

Aseptic Ligation of the Intestine.

In the December number of the *Annals of Surgery*, there are two articles on this subject. The first, by F. K Collins, is extremely well illustrated by outline drawings, and proposes an apparently very simple and effective procedure. The second article, by C. H. Horine, is profusely illustrated by very diagrammatic drawings which are a little more difficult to interpret. The principle of both, however, depends upon a withdrawable suture which can be released after the anastomosis is practically complete. The reader is especially referred to Collins's article and his excellent drawings.

The author, in conclusion, speaks of the following advantages:

1. The method can be applied to any portion of the intestinal tract except lower rectum, and remove any number of inches or feet.
2. The resection is aseptic, the suturing as nearly so as any non-penetrating suture can be.
3. The suturing is greatly facilitated by the clamps which at the same time guard the looped ligature.
4. No handling of the remaining intestine, through its lumen or externally, is required.
5. Simply withdrawing the looped ligature opens the lumen and enables the bowel to function.
6. The whole operation can be performed with surprising quickness, thus minimizing shock.
7. All of the advantages of an end-to-end anastomosis are gotten without contamination. [E. H. R.]

The Efficient Treatment of Acute and Chronic, Simple, Traumatic Synovitis (Haemarthroses and Hydarthroses) by Repeated Aspirations and Immediate Active Mobilizations without Splinting.

McWilliams, Clarence A. (*Surgery, Gynecology and Obstetrics*, December, 1922) writes as follows:

Repeated aspirations combined with active (never passive) motions, and walking without splints, afford the best method of treatment of acute and chronic, traumatic, joint synovitis, provided there be no joint mouse nor dislocated meniscus present.

Aspiration should be immediately performed in all types of traumatic joint effusions, as it relieves pain immediately, renders a correct diagnosis more certain, prevents stretching of the ligaments with their consequent weakening, and avoids subsequent muscular atrophy.

Such treatment makes unnecessary all other subsequent physiotherapeutic measures, hence its simplicity makes it applicable to all classes of patients.

Such a method of treatment produces a more perfect cure in one-half of the time that is required by the old immobilization method.

To leave fluid in a knee, the result of trauma, is just as irrational as to leave fluid in a chest unaspirated.

Aspiration of a knee is a simpler procedure, and less dangerous than aspiration of a chest, and can safely be performed in a doctor's office or a dispensary, and the patient thereafter can be immediately sent home walking.

The effects of physiotherapeutical measures have been overestimated, being used empirically and without foundation. They are makeshifts to excuse procrastination in not applying a radical, curative procedure such as aspiration [E. H. R.]

Forward Dislocation of Both Bones of the Forearm at the Elbow.

Cohn, I. (*Surgery, Gynecology and Obstetrics*, Dec., 1922), writes as follows:

Anterior dislocations of both bones of the forearm are rare. Only twenty-three cases, including the case herewith reported, have been found in a review of the literature. In all cases which have been verified by operation or autopsy, there has been an extensive laceration of the ligaments about the joint, and a stripping up of the muscles in the immediate vicinity from the respective bones.

Anterior dislocations of the elbow may be either uncomplicated, or associated with a fracture of the olecranon or coronoid process. A review of the literature suggests that some of the cases have been reduced with very little difficulty

The case which forms the basis of this report showed that there was an extensive stripping up of muscles and interposition of soft parts between the lower end of the humerus and the ulna. Such a condition shows the impossibility of a non-operative reduction, particularly if seen late, as in this case.

The approach to the elbow in such instances had best be done by lateral incisions rather than the linear posterior incision, or the method recently suggested by MacAusland. The position after operation had best be one of complete extension, because the olecranon in complete extension is fixed in the olecranon fossa behind the trochlea. If the elbow is put in hyperflexion there is a tendency of the olecranon to slip forward again and reproduce deformity. After a few days it is advisable to begin mobilization of the joint. [E. H. R.]

The Question of Recurrent Renal Calculi.

Barney, J. D. (*Surgery, Gynecology and Obstetrics*, December, 1922) writes as follows:

There is an unfortunate paucity of investigation on the matter of recurrent or overlooked renal calculi, and it would be desirable to have various observers in different clinics undertake such an investigation.

Roentgenographic examination during or very shortly after convalescence is essential for the accuracy of the results in such a piece of work.

While the few data which are at hand show that stones are subsequently found in the kidney after operation in a surprising number of instances, it is impossible to say which of these stones are "recurrences" and which are "left overs." Actual recurrence is unquestionably very frequent

The complex character of the kidney, haemorrhage from its mucosa, and the comparative inaccessibility of this organ in many cases contribute to the difficulties in removing all stones.

Although various procedures may be resorted to for this purpose, none is infallible. It would appear that the fluoroscope offers the most promising prospects for success.

Preoperative study cannot be too painstaking, nor must the possibility of superimposed shadows of calculi be overlooked.

A second operation for the removal of remaining stones is advisable in most cases, and should be done soon after first operation.

Pyelotomy is unquestionably the operation of choice, and is often advantageously combined with partial nephrotomy. [E. H. R.]

DIVERTICULA OF BLADDER IN CHILDREN.

HYMAN (*Surg., Gyn. and Obstet*, Jan., 1923) writes as follows:

Vesical diverticula are rare findings in childhood, not more than 30 being found in a review of over 600 cases.

Diagnosis of this condition in children should present no difficulties. Little value can be placed on the history. Physical examination of the abdomen is of considerable importance. A chronically distended bladder, especially asymmetrical in outline, should make one suspicious of a diverticulum. The cystoscope and cystogram are absolutely essential in making a correct diagnosis. Of the two, the cystogram will be found more valuable.

No evidences of obstruction, either vesical or urethral, were found in the three cases reported in this article. All three diverticula were in immediate proximity to the ureter; in one, the ureter opened into the sac, and as a result the ureters were compromised to such a degree as to cause obliteration of the lumen, with resultant dilatation. Division of ureter with reimplantation was performed in all three cases, with recovery of patients.

Undoubtedly there will be an increase in the number of cases reported as soon as cystoscopy in children becomes more of a routine procedure. The presence of diverticula in patients so young, without evidences of any obstruction, leads one to conclude that they were congenital and that in all probability many of the diverticula in adults have also a similar origin. [E. H. R.]

UNILATERAL DIURESIS.

FULLERTON (*Surg., Gyn. and Obstet.*, Jan., 1923), after an exhaustive study of such conditions as renal calculus, tuberculosis of the kidney, unilateral pyelitis, various tumors of the kidney, congenital and hydatid cyst of the kidney, hydro- and pyonephrosis, movable kidney, even in wounds of the kidney, and in many other unclassified conditions, finds that one of the most important factors in determining which kidney is the seat of the disease is the marked reduction in specific gravity of the urine from the affected side. This is a bit of evidence which will often solve a puzzling case. [E. H. R.]

REGENERATION OF RESECTED URINARY BLADDERS IN RABBITS.

SCHILLER (*Surg., Gyn. and Obstet.*, Jan., 1923) writes that a close study of these histological findings gives definite proof that we are justified in speaking of a true regenerative process in these reformed bladders; the muscle fibers in the new-formed wall are described as slender, so are the muscle bundles. If we had to deal with hypertrophic and hyperplastic conditions, we would expect just the contrary. Hyperplasia, no doubt, takes place shortly following the resection, but soon regeneration sets in and plays an important part. [E. H. R.]

METABOLISM READINGS IN EIGHTY-FOUR PREGNANT CASES.

CORNELL (*Surg., Gyn. and Obstet.*, Jan., 1923) writes that from the findings in this series of cases the following conclusions may be reached:

1. There is an increase in the metabolic rate above normal in pregnant women. It has a wide variation, however. There is nothing approaching a constant.
2. The test is subject to many errors beyond the control of the technician. The mental attitude of pregnant women is not stable, therefore the readings are not always reliable. Many tests in the experiment were not included in the report because of the hysterical condition of the patient at one or both tests.
3. The result in toxic cases were so variable that no reliable information was obtained. We could lay down no rule to guide us in determining the degree of toxicity or recovery in a given case. Neither could we say from the reading that labor should or should not be induced.
4. The death of the fetus cannot be predicted from the metabolic rate.
5. The test consumes considerable time, effort, expense, and patience far out of proportion to the value of the information obtained. [E. H. R.]

RADIUM TREATMENT OF KELOIDS.

DALAND (*Surg., Gyn. and Obstet.*, Jan., 1923) writes as follows:

It seems probable that every keloid can be destroyed by radium if a sufficient dose is used.

Silver filtration (1 millimeter) should be used in keloids of recent origin, in children, in people of dark complexion and in exposed areas, as the face. The dosage should be from 30 to 50 millicurie hours, according to age of the patients.

Practically unfiltered tubes should be used on all other keloids. The dosage should be from 15 to 30 millicurie hours per tube. It should be explained to the patient that ulceration will result from this type of treatment.

There is no evidence to show that the destructive doses damage the tissues so that the lesions recur. There is no lessening of the tendency of an individual to develop keloids. [E. H. R.]

HEMORRHAGE FOLLOWING ABDOMINAL OPERATIONS, WITH SPECIAL REFERENCE TO APPENDECTOMY AND EXCLUDING BLEEDING FROM THE STUMP.

PHIFFR (*Surg., Gyn. and Obstet.*, Jan., 1923) writes as follows:

The modern view based on the pathology points to sepsis and toxemia as the basic cause of the hemorrhagic lesions; and in the case of a diseased, gangrenous, or perforated appendix, the spread of the infection to some neighboring vessel and thence to the stomach or intestinal wall is easily comprehended. Such a mechanism is well known; for instance, in the case of postoperative hematemesis after a gastroenterostomy has been done for duodenal ulcer.

As stated by Rodman, the gastric mucosa is particularly liable to congestion and hemorrhage in conditions of sepsis.

To my mind, trauma or embolism, either separately or collectively, seems a more logical solution of the true cause of this condition than any of the other etiological factors, for in either we may have sepsis and necessarily with both we may have slough, thus the possibility of hemorrhage. [E. H. R.]

Cystography an Aid in Diagnosis of Certain Urological Conditions.

Moore (*Jour. of Urol.*, August, 1922) says that 10 per cent. sodium bromide solution is the best for general use. Careful preparation, as ample cathartics and colonic flushing, are most needful as feces in the rectum have given similar elevations in the bladder to enlarged prostate. Error in reading may come about as a filling defect may be due as much to blood clots as to the tumor itself. Sacculations are very nicely shown and can be best brought out by stereoscopic views. Hydroureter may be nicely shown when a bladder has been injected. [B. D. W.]

Urinary Lithiasis in Children.

Thomas and Tanner (*Jour. of Urol.*, August, 1922) report urinary lithiasis is frequent in childhood and infancy, the average occurrence in the three large series reported being 43 per cent.; average age is 7.8 years. The youngest patient in this series was 10 months old. The authors were unable to determine the etiology of urinary stones in infants, although in their opinion infection is one of the factors.

Twenty-one per cent. of the cases involved the kidneys or ureters. The comparison of right kidney to left was 21 to 8. Only 8 per cent. were arrested in the ureter. Assuming that the majority of urinary stones in infants (except in the presence of urethral obstruction or malformation) originate in the kidney, 69 per cent. will pass as far as the bladder. The symptomatology in the order of occurrence is as follows: (1) pain and colic, (2) hematuria, (3) frequency, (4) pyuria, (5) dysuria, (6) nausea and vomiting.

The infant ureter is capable of great distention or in some other manner facilitates the easy passage of ureteral stone. Diagnosis depends upon the following positive findings: (1) x-ray (112 in 203 cases), (2) cystoscopy, 33 per cent., (3) urinalysis, 52 per cent., (4) clinical findings alone, 11 per cent.

Surgery is indicated when stones do not progress through the urinary tract. Seventy-eight per cent. of the operations were done on the bladder and urethra. When renal stones are bilateral, surgery should be carefully considered. The prognosis is unusually good. In this series there were two deaths, one with bilateral stones, the other occurring in conjunction with urinary malformation; 50 per cent. were reported cured; 2.5 per cent. had recurrence of symptoms, and 47 per cent. were not reported. Urinary stone in children may remain symptomless for many years. One patient had ureteral stone for eight years with slight symptoms. Stones discovered during adult life may have their beginnings during childhood or infancy. [B. D. W.]

Coincident Calculus and Diverticulum of the Bladder.

Crenshaw and Crompton (*Jour. of Urol.*, Sept., 1922) recently made a study of 609 patients with stone in the bladder. During the same period there were 222 who had diverticula of the bladder. Twenty-eight of these (12 per cent.) had diverticula and bladder stone. Benign prostatic hypertrophy was noted in 11, stricture in five, and atonic bladder in two; carcinoma was present in three. Twenty-seven of the twenty-eight patients were male. The one woman in the series had a diverticulum of the base of the bladder, which was probably the result of an operation for the closure of a vesicovaginal fistula.

Diverticula of the bladder occur more frequently than is usually supposed and may often contain stones. The incident of primary and recurring stone in the bladder seems higher than when there are no diverticula. Diverticula are often overlooked both on examination and at operation. They may be easily diagnosed by means of the cystogram. We should not be satisfied to remove a stone from the bladder, but should, if possible, correct the cause of its formation and thus prevent recurrence. [B. D. W.]

A Report Following the Use of Mercurosal in Treatment of 150 Cases of Syphilis.

Keane and Slaugenhaupt (*Jour. of Urol.*, Sept., 1922) say that in a series of 150 cases, one decigram of mercurosal was administered every second day, and in no case was it necessary to stop or to lengthen the interval between injections because of local or systemic reaction. Noticeable systemic reactions were present in only three cases, the complaint being slight gastro-intestinal irritation, headache and moderate diarrhea. Salivation, spongy gums and sore teeth were entirely absent, and next to the local reaction itself this condition was the second biggest factor as a cause for discontinuing insoluble intramuscular injections.

Relatively larger doses of mercury can be given with mercurosal; a more accurate grading of dosage is possible. In this series careful urinary findings gave no evidence of renal irritation. Mercurosal is eliminated through the kidneys, practically 90 per cent. being eliminated within the first 24 hours, and 100 per cent. in three days. This drug is not a substitute for the arsenic combinations, like salvarsan, but from a clinical standpoint might be considered a therapeutic companion to salvarsan since its chemical structure is somewhat similar to salvarsan. The origin of both is the chemical benzene ring, salvarsan being a benzene derivative of arsenic, and mercurosal a benzene derivative of mercury. [B. D. W.]

Hydatid Cyst at the Site of the Prostate.

Plaggemeyer and Cumming (*Jour. of Urol.*, Sept., 1922) state that hydatid cyst occurring singly at the site of the prostate is rare; symptoms always follow some obstructive phenomena with pressure upon bladder, urethra, ureters and bowel. The prostate has not been proven as the origin of any recorded cyst. Dissection usually shows the cysts to be situated more or less contiguous to the posterior bladder wall, possibly arising in the cellular tissues between muscle and peritoneum, or more often, in the angle between this layer, the recto-vesical sheath and the posterior border of the prostate. In the case reported the origin was probably the latter. The disease is difficult of diagnosis except where it occurs frequently enough to provide for such methods as the complement fixation test.

The majority of cases of hydatid disease in North America occur in immigrants, indicating infection in foreign lands and slow development of the cysts. The accepted treatment is surgical removal of the cyst fluid, daughter cysts and germinal layer of the cyst wall. In the case reported, no hooklets, scolices, or sugar were found. The patient had neither an eosinophilia nor an urticaria following peritoneal leakage. Three factors were responsible for the death of the patient: intestinal obstruction, infected pyelonephritis and general peritonitis. [B. D. W.]

THE BOSTON
Medical and Surgical Journal
Established in 1828

Published by The Massachusetts Medical Society under the jurisdiction of the following-named committee:

For three years William H. Robey, Jr., M.D.
Roger I. Lee, M.D.
Robert B. Osgood, M.D.
For two years James S. Stone, M.D.
Horace D. Arnold, M.D.
Channing Frothingham, M.D.
For one year Homer Gage, M.D., *Chairman.*
Edward C. Streeter, M.D.
Edward W. Taylor, M.D.

Editorial Staff.
David L. Edsall, M.D.
Walter B. Cannon, M.D.
Reid Hunt, M.D.
Robert W. Lovett, M.D.
Francis W. Peabody, M.D.
John P. Sutherland, M.D.
S. Burt Wolbach, M.D.
George R. Minot, M.D.
Frank H. Lahey, M.D.

Walter P. Bowers, M.D., *Managing Editor.*
George G. Smith, M.D., *Assistant Editor.*

Subscription Terms: *$6.00 per year in advance, postage paid for the United States, $7.56 per year for all foreign countries belonging to the Postal Union.*

Material for early publication should be received not later than noon on Saturday. Orders for reprints must be sent to the printer with galley proof of paper. Upon written request, authors will be furnished free one hundred eight-page reprints, without covers, or the equivalent in pages in articles of greater length.

The Journal does not hold itself responsible for statements made by any contributor.

Communications should be addressed to The Boston Medical and Surgical Journal, 126 Massachusetts Ave., Boston, Mass.

MILK: SAFE OR UNSAFE?

Milk is today one of the most important and widely used of foodstuffs. It is the only animal food that is habitually eaten raw. It is at present the only recognized substitute for breast milk. It cannot be denied that milk, as it is at present distributed, may have definite dangers to health, especially to infants and children. Human milk is practically always sterile; cow's milk never is, and on the types of organisms it contains depends its possible health menace.

Milk is used in infant feeding in three common ways,—raw, pasteurized, and boiled. The advantages and disadvantages of each method should be weighed before deciding on the one to be employed. Raw milk from properly fed cows contains its vitaminic elements in undiminished quantity. It may, unless certified, also contain pathogenic organisms, notably the bovine tubercle bacillus. Raw milk is less easily digested than cooked milk. Commercially pasteurized milk suffers a slight reduction in its vitaminic properties; according to Hess, in fact, pasteurization is more destructive of the antiscorbutic vitamine than is boiling. It is partially sterilized, but there is a potential danger of the further growth of unskilled organisms, or the entrance of fresh organisms, between the times of pasteurization and ingestion. Boiled milk is much better adapted to the infant's digestion, and its loss of vitamine content is easily remedied by the addition of orange juice or orange juice and cod liver oil to the diet. A certified milk, known to be reliable, may perhaps be fed raw with comparative impunity, but even in the use of such a milk, it must be recognized that the loophole of human liability to error is left open and cases of bovine tuberculosis developing in infants fed exclusively on a raw certified milk are far too common.

A boiled *fresh* milk, a milk that does not already contain the toxic products of bacterial growth, is the only entirely safe milk that can be fed to infants; it is a more digestible form of milk than either raw or pasteurized milk, and the slight disadvantage of lessened accessory product content is easily remedied.

Aside from its use in infant feeding, it is high time that our milk supply should be standardized by the State. No milk from a tuberculous cow should be sold in this State, and it is almost a disgrace that we should have to pay an extra charge for milk that is known not to come from such a source.

As we stand today, investigations by the Bureau of Animal Industry in Massachusetts indicate that approximately 25 per cent. of the tested dairy animals of our herds react positively to tuberculin. We have about 160,000 dairy cows in the State, and although only a small proportion have been tested, enough work has been done to show that tubercuolsis in dairy animals is very general.

Of tremendous importance in connection with this phase of the situation is the fact that a tuberculous cow introduced into a tuberculosis-free herd will infect a large proportion of the herd in less than six months, and also of importance is knowledge of the fact that such an animal, if its infection is early detected, is not unfit for human consumption, for in its early stages tuberculosis is limited to the parts of the animal not used for food. Farmers would do better to have such an animal killed early, for its food value is greater, and with State indemnity the loss is less than if slaughtering is postponed. For a reasonable study of this subject and the employment of remedial measures the Bureau of Animal Industry needs about $100,000.

The farmer's point of view, and the farmer's protection in contemplating any such necessary reform must of course be given careful consideration. The importance of agriculture puts a certain responsibility on the State to help the farmer to understand that clean, wholesome milk is worth more than dirty or infected milk, and that before we can hope for a great reform the farmer must be led to co-operate, both as a public health measure and also for his own financial advantage.

FUNCTIONS OF A PUBLIC HEALTH COMMITTEE.

Public health problems in the state of Massachusetts are similar to those in the neighboring state of New York; those of the city of Boston differ only in degree from those of New York City.

Advisory functions which are, in this state, somewhat divided among the Public Health Committee of the Massachusetts Medical Society, the Society Committee on Legislation, the Advisory Health Committee to the Boston Board of Health, and other committees, are in New York largely performed by the Public Health Committee of the New York Academy of Medicine. Centralization or division of this labor is a point which need not be discussed at present, but the many problems attacked by the New York Committee in the eleven years of its existence may well serve as examples of service to other such organizations.

Dr. E. H. Lewinski-Corwin, executive secretary of the Public Health Committee of the New York Academy of Medicine, has reviewed many of the services of his committee in *The Nation's Health*, December 15, 1922. Acting as an advisory body to the City Health Department, he states, among other things that "the committee was the first, to my knowledge, to set a standard ratio of physicians and nurses to school population in the work of medical school inspection of children. Of a similar character were the studies of health conditions in the police force of the city, pollution of the harbor, the protection of the Croton watershed, of the value of open-air tenement houses, air space in institutions for infants, malnutrition among school children, and of street cleaning, during the course of which were collected all available data on the pathogenicity of street dust.

"In addition to studies and surveys, the Committee has given to the community its collective opinion on the value of many proposals and such administrative procedures as quarantine of measles, typhoid immunization, reporting of venereal disease cases, reporting of cases of encephalitis lethargica, segregation of mental defectives, tonsil and adenoid operations, control of typhus fever, drug addiction, factory health inspection, oligogenics, popularly known as birth control, certified milk, twilight sleep, the need and character of the state census of population, etc.

"The Committee has ever striven to raise the standards of medical practice to make it serve best the interests of public health. With the same aim in view it combated all legislation injurious to the health of the community, like anti-vaccination, anti-experimentation on animals, the licensing of practitioners having no adequate preparation for the practice of medicine, the lowering of standards of civil service, and the like.

"All the work done by the Committee could not but have its cumulative effect. Democracy does not function rapidly, changes are wrought imperceptibly. Moreover, that which is to endure does not grow fast. There are, however, a few definite achievements of the Committee which can readily be claimed. To mention only a few of them: (1) It was chiefly through the efforts of the Committee that the quarantine station at the Port of New York was turned over by the state to the Federal Government; (2) that dispensaries have abandoned the performing of tonsillectomies; (3) that the work of venereal disease clinics has been improved; (4) that an Association of Out-Patient Departments was formed and first attempts made to formulate standards for the conduct of clinics."

These are not the only performances of this Committee, but the list will show, perhaps, the scope of activities which may be carried on by such an organization.

PLACENTAL TRANSMISSION OF DIPHTHERIA IMMUNITY.

The low incidence of diphtheria susceptibility among infants under the age of six months, approximating the percentages generally obtained with adults, has been ascribed to the transmission of immune bodies via the placental circulation. Some workers have doubted this method of transmission; others have preferred to believe that the immunity to various infections has been conferred by breast milk. It is rather remarkable that a phenomenon so easily demonstrable has hitherto been so little studied.

Ruh and McClelland, *Am. Jour. Dis. Child.*, January, 1923, report a series of one hundred Schick tests performed on mothers and their new-born babies. Of this series mother and baby were positive in twenty cases, mother and baby negative in seventy-five, mother positive and baby negative in four, and mother negative and baby positive in one. The five cases showing a discrepancy can easily be explained by the ordinary slight error in this procedure, augmented by the difficulty of performing a technically perfect Schick test on a new-born babe. As a rule the positive reactions in the infants were found to be less marked than in the mothers. Eight of the babies giving negative reactions had not received breast milk or colostrum before the test was performed, thus ruling out the maternal breast secretion as a necessary agent of transmission.

The proof that this immunity is conferred by the mother by way of the placental secretion seems ample. It would be of interest to test a similar series in which the originally positively reacting mothers had been actively immunized with toxin-antitoxin several months before the birth of their babies. It is logical to assume that the results would be the same.

SEWAGE DISPOSAL.

The United States Public Health Service publishes conclusions drawn from a survey of sewage treatment plants, conducted by H. H. Wagenhals, associate sanitary engineer, in the summer of 1920.

The devices and processes employed at the plants studied included primary plain sedimentation, septic, hydrolytic, and Imhoff tanks; fine screens; trickling, contact, and intermittent filters; secondary sedimentation; and activated sludge.

All municipal sewage, says the author, must ultimately be disposed of by dilution in some body of water, and the purpose of treatment is to prepare the sewage so that it will not produce objectionable conditions in the receiving body of water, or, in some cases, place an undue load on a water purification plant using the receiving body of water as a source of supply. To these may be added the protection of bathing beaches, oyster beds, etc.

With but one or two exceptions it was found that the plants visited were accomplishing the main object of their existence, and, while not perfect, it was found that the methods employed were not deserving of the unfavorable reputation they hold in the minds of some individuals of limited experience. It is, however, hoped that some day a standardization of methods of sewage disposal will be made possible.

News Notes.

Death Rate in Boston.—During the week ending January 27, 1923, the number of deaths reported was 295, against 226 last year, with a rate of 19.96. There were 53 deaths under one year of age, against 35 last year. The number of cases of principal reportable diseases were: Diphtheria, 64; scarlet fever, 72; measles, 52; whooping-cough, 113; tuberculosis, 23. Included in the above were the following cases of non-residents: Diphtheria, 5; scarlet fever, 8; tuberculosis, 2. Total deaths from these diseases were: Diphtheria, 7; measles, 1; whooping-cough, 8; tuberculosis, 8. Included in the above were the following cases of non-residents: Diphtheria, 2; measles, 1.

The Massachusetts Association of Boards of Health.—The Massachusetts Association of Boards of Health held its annual meeting, January 25, at Hotel Brunswick. Officers for the coming year were elected as follows: President, W. L. Young, Springfield; first vice-president, George L. Tobey, M.D., Clinton; second vice-president, Francis P. Denny, M.D., Brookline; secretary, W. H. Allen, M.D., Mansfield; treasurer, F. G. Curtis, M.D., Newton.

Dr. John A. Ceconi of Boston Health Department read a very able paper on the "Schick Test." Discussion was opened by Dr. Miner, district health officer in the Connecticut Valley. Dr. Place of the South Department of Boston City Hospital, followed, and Drs. Rafferty of Lynn, Nye of the State Laboratory, Kenny of Worcester, and Curtis of Newton all entered into the discussion.

The meeting was one of the most successful gatherings the association has held.

W. H. Allen, *Secretary.*

New England Dermatological Society.—The following cases were shown at the December meeting of the New England Dermatological Society, held at the Boston City Hospital: (1) Girl, 7 years old; morphea. Dr. E. L. Oliver. (2) For diagnosis. Three sisters, aged 10, 12, and 14 years; atrophic areas on face; duration, one and a half to three years. Scleroderma and idiopathic atrophy considered. Dr. L. J. Cummins. (3) Case for diagnosis. Young woman with lesion on forehead; definite elevated border and covered with telangiectases. Keloid and sarcoid considered. Dr. L. J. Cummins. (4) Man, 30 years old; ichthyosis. Dr. W. P. Boardman. (5) Man, 44 years old; backs of hands, brown, scaling; attacks of diarrhea; delirious at times; pellagra. Dr. W. P. Boardman. (6) Boy, 18 years old; marked scarring about corners of mouth; congenital syphilis. Dr. W. P. Boardman.

Invitation to Advise the League of Nations Health Committee.—The hygiene committee of the League expects to secure Dr. Hugh S. Cumming, head of the United States Health Department, as a consultant in matters affecting the health of the people of different countries.

The Lawrence Medical Club.—The monthly meeting was held Monday evening, January 22, with Dr. M. S. Gauran at Y. M. C. A. building. The chairman of the evening was Dr. J. J. Sullivan. Informal talk on "Identification by Fingerprints," by Lieutenant M. E. Byron of the Lawrence Police Department.

Massachusetts General Hospital.—The Fortnightly Clinical Conference of the Medical Staff was held in the Cardiac Clinic Room, Out-Patient Department, at noon, Tuesday, February 6. Cases were presented for discussion. These conferences are held on the first and third Tuesdays of each month.

Bequests.—Under the terms of the will of Sarah J. Robinson, St. Joseph's French Catholic Hospital and the Memorial Hospital of Nashua, N. H., will each receive $25,000, and $10,000 will go to the Trudeau Sanitarium. The "faithful nurse" of the deceased will receive

$25,000. Under the terms of the will of Edwin R. Hoag the Chelsea Memorial Hospital and the Chelsea Day Nursery of Chelsea, Mass., will each receive $1000.

◆

LEGISLATIVE MATTERS.

THE Committee on Public Health reports no legislation necessary on House Bills 110 and 111, relating to the education and registration of optometrists, and leave to withdraw on House Bill 211, relating to the constant attendance of a physician in hospitals that have a capacity of more than 50 beds.

A hearing on Senate Bill 153, which provides for right to sue hospitals negligently causing the death of a patient, was held January 31.

The occasion which inspired the presentation of this bill was the death of a patient following the administration of corrosive sublimate by a nurse, in place of a dose of epsom salts. The bill was opposed by representatives of the Massachusetts General and the Peter Bent Brigham hospitals and the Eye Infirmary on the ground that it is probably unconstitutional in so far as it applies to charitable institutions, for the funds contributed are for the purpose of providing medical service and that trust funds cannot be diverted from the purposes of the trusts. The Supreme Court has rendered a decision that charitable institutions may not be sued for the acts of an employee.

Arguments tend to show that a menace of this sort would be likely to be so burdensome that hospitals could not be maintained, because it often happens that, when patients die, the friends infer that deaths may have been the result of negligence. If the Legislature should enact a bill of this kind suits would be frequent. It is true that a few states have adopted laws of this character, but the effect is so far reaching that the burdens thereby imposed are looked upon with the greatest apprehension. Under such laws hospitals might have to change the systems of records, for in contested cases courts might require the submission of records which are of value to hospitals and patients, but which could be criticised by attorneys and used to mislead juries.

The report of the committee and the attitude of the Legislature on this matter should be watched.

NOTICE:—Physicians should ask a Senator or Representative for information relating to hearings on any legislative activities in which they are interested. The assignment of dates of hearings is often too late to be published in this JOURNAL.

LEGISLATIVE HEARING ON HOUSE BILL 435.

THIS bill is based on the petitions of Philip S. Parker and others, Selectmen of Brookline, and provides for the licensing of private hospitals by boards of health, and further provides that no license to establish a private lying-in hospital shall be valid until also licensed by the Department of Public Welfare, and licenses for private institutions established for the care of insane, epileptic, feeble-minded or narcotic addicts shall also be licensed by the Department for Mental Diseases.

Mr. Charles F. Rowley of Brookline, for the proponents, reported that the town of Brookline, in a public meeting, had endorsed the main features of the bill, for the purchase of property in that section for the purpose of establishing hospitals had depreciated the value of other properties. He argued that since garages, hen houses and other objectionable ventures were subject to license, the hospitals should be subject to certain restrictions.

A considerable number of people also argued in favor of the bill and cited instances when the odor of ether permeated the neighborhood, and patients with unhealed wounds and wearing dressings were seen. The effect on children of seeing these people was claimed to be bad, and the behavior of mentally ill patients was distressing. Dr. Bartol, President of the Massachusetts Medical Society, expressed the feeling that the multiplication of hospitals warrants giving the right to people to express their opinions before a licensing board.

Mr. Fitz Henry Smith, representing the Massachusetts General, the Peter Bent Brigham and the Massachusetts Homeopathic hospitals, Dr. Washburn, superintendent of the Massachusetts General Hospital, and others spoke against the bill and expressed the opinion that the plan of licensing hospitals calls for the action of so many boards of health that lack of uniformity would result.

Mrs. Thayer brought out the facts that conditions were rather worse in Dorchester and Roxbury and were more objectionable than in Brookline, and that there are over eighty strictly private hospitals throughout the state.

HOUSE BILL No. 274.—The bill on vaccination accompanying the petition of Samuel B. Woodward is House No. 274—not 275, as previously published.

DISPOSAL OF WAR SURPLUS MATERIAL.

ON February 23, 1923, Major James L. Frink will be in Boston and will give addresses on the subject of the disposal of war surplus material. Many medical and hospital supplies have had to be disposed of to the advantage of purchasers.

Such persons as may be in need of these supplies may be interested in keeping in touch with the government plans.

LECTURE COURSE IN MENTAL HYGIENE.

The lecture course on "The Mental Hygiene of Children" in Springfield was opened on January 3 by Dr. Pratt, the Medical Director, who spoke on "What Is Mental Hygiene and Why Does It Concern Everyone?" Dr. William A. Neilson, President of Smith College, presided as Chairman.

This was the first of a series of seven weekly lectures to be given under the auspices of our Connecticut Valley Committee. On January 3, Dr. Douglas A. Thom, Director of the Habit Clinic, spoke on "Conduct Disorders in Children of Pre-School Age."

Arrangements have been made with the Division of University Extension of the State Department of Education to grant a credit certificate to students who satisfactorily complete this course. Other speakers include Dr. Abraham Myerson, Dr. George E. McPherson, Dr. Augusta Bronner, Dr. A. Warren Stearns, and Dr. William H. Burnham—Monthly Bulletin of Mass. Society of Mental Hygiene.

BELCHERTOWN STATE SCHOOL FOR FEEBLE-MINDED.

Among the trustees appointed by Governor Cox to the new Belchertown State School for the Feeble-Minded are included two members of the Massachusetts Society for Mental Hygiene, Miss Frances E. Cheney of Springfield, and Mrs. W. Murray Crane of Dalton.

Other members of the Board of Trustees are: J. A. Skinner of Holyoke, Henry Dean of Worcester, John R. Callahan of Holyoke, F. A. Farrar of Northampton, and Dr. Theodore S. Bacon of Springfield.—Monthly Bulletin, Mass. Society of Mental Hygiene.

Obituary.

RESOLUTION ON THE DEATH OF DR. PINKHAM.

On November 30, 1922, Dr. Joseph Gurney Pinkham died at his home, 64 Nahant St., Lynn, Mass. We thus witness the passing of a Christian gentleman; a physician, well and widely known, for his talents were conspicuous in his chosen field. We of the Lynn Hospital, his colleagues, will remember him best in his aspect of a surgeon of recognized ability and fine judgment, while yet mindful of his broad knowledge of and experience in medicine and chemistry. His counsel was often wished and sought for by many of us. In his latter years of failing strength, we have missed him as a friend and co-worker. We always admired his untiring devotion to his profession, prompted by a high sense of duty and made possible by his rugged constitution, an inheritance from his New England stock, he having been born in West Gardiner, Maine; his father, Elias, and his mother, Fannie Sampson, in Freeport, Maine, and Leeds, Maine, respectively. We are justly proud of his record as Medical Examiner of a district of Essex County, comprising Lynn, Swampscott, Nahant, and Saugus, for during an unbroken period of forty-two years, more than half his lifetime, he was honored by repeated appointments to this office, the duties of which he always performed well and honestly. In this connection he was an honored member of the Medico-Legal Society of Massachusetts, serving at one time as its President, and contributing to its files many valuable opinions and an important article on arsenic poisoning.

In civic duty we again find Dr. Pinkham living up to a high ideal and giving of his strength of mind and body to his home city, for he served on the School Committee for a period of years.

We, of his associates, who were fortunate enough to see and know Dr. Pinkham's life in his home, realize that he toiled willingly and lovingly for his family; his chief aim being to give them life's worth-while blessings. His home life and social life were one and it was with keen delight that he took part in the readings of a Shakespeare Club that often met at his house. Throwing off the cares and responsibilities of his profession but for a few minutes, he gave to his home his rare wit and humor, little known of or suspected by the outside world. We feel that our friend, Dr. Pinkham, has left to his family a priceless heritage in his character and we know that as his colleagues we share in that heritage through the influence of his character upon our profession.

NATHANIEL P. BREED, *Committee.*

RECENT DEATH.

DR. EUGENE HENRY HOWARD, a fellow of the Massachusetts Medical Society, died at his home in Pittsfield of cerebral hemorrhage, January 19, 1923, at the age of forty-nine.

He was a native of North Brookfield. Graduated A.B. at Holy Cross College, Worcester, in 1894, and M.D., Harvard Medical School in 1898. He held also the honorary degree of M.D. from Syracuse University, N. Y., 1903. He was not married.

Dr. Howard was Grand Knight and District Deputy Grand Knight of the Knights of Columbus, President of the Berkshire District Medical Society in 1915-16 and Censor in 1920-21, and he held membership in the American Medical Association.

Miscellany.

PRINCIPAL CAUSES OF DEATH: 1921

The Department of Commerce announces that the compilations made by the Bureau of the Census show that 1,032,009 deaths occurred in 1921 within the death registration area of continental United States, representing a death rate of 11.6 per 1,000 population as compared with 13.1 in 1920. The rate for 1921 is the lowest rate recorded in any year since the beginning of the annual compilations in 1900.

The death registration area (exclusive of the Territory of Hawaii) in 1921 comprised 34 States, the District of Columbia, and 16 cities in nonregistration States, with a total estimated population on July 1 of 88,667,602, or 82.2 per cent. of the estimated population of the United States.

The death rate from cancer increased from 83.4 per 100,000 in 1920 to 86 in 1921. Some of the other diseases for which the rates increased are diphtheria, typhoid fever, appendicitis, scarlet fever, diabetes, and puerperal fever. The fatalities caused by automobile accidents and injuries show an increase from 10.4 per 100,000 in 1920 to 11.5 in 1921.

A marked decrease is shown in the death rate from tuberculosis, which was 99.4 in 1921 as compared with 114.2 in 1920; also in the death rate from influenza and pneumonia (all forms) which was 99.8 in 1921 against 208.3 in 1920. The rates for measles, bronchitis, nephritis, whooping cough, heart disease, and diarrhea and enteritis also declined.

AN APPEAL.

One hundred Russian university and professional men, mostly scientists, many of them internationally famous, recently exiled from Russia by the Soviet government, are in Berlin in serious circumstances. Local charity is housing and feeding them, but they lack sufficient clothing, shoes and pocket money to get through the winter without acute distress. An appeal has come to the American Relief Administration for one thousand dollars to provide some relief (averaging only $10 a man) for these exiles. Unfortunately all of the A. R. A. funds must be spent for relief inside of Russia. The appeal has been turned over to me. Will the scientific men of America help these suffering scientific men of Russia?

A generous friend, Princess Cantacuzene, of Washington, has given me one half ($500) of the sum needed. I shall be glad to be one of fifty to give $10 each, or one of one hundred to give $5 each, to make up the other half. I will undertake to receive the gifts and send personal receipts for them, and later obtain and publish in *Science* a blanket receipt from Berlin for the whole amount received and sent overseas.

Vernon Kellogg.

National Research Council, Washington, D. C.

[*Science*.]

DIFFICULTY OF GETTING ACCURATE REPORTS OF CANCER DEATHS.

In the Monograph surveying the cancer situation in the United States, which was published by the Census Bureau in 1916 at the request of the Society, the rather startling fact is revealed that over 35,000 letters had to be sent to doctors in order to obtain sufficiently accurate diagnoses of cancer cases. This shows the enormous possible error in reporting a disease so difficult to diagnose as cancer.

That the *reported* deaths from cancer will increase as years go by, there is not the slightest doubt. The certification of deaths in many European states is far more accurate than in this country, and those which have the best records show the highest cancer rate, so that in a way, a high reported cancer rate is the best testimony of the accuracy of the death certificates.

It is certain that the Census Bureau's figures of 93,000 deaths is some 20 to 30 per cent. below the actual figures, for it has been shown that post-mortem examinations reveal unsuspected cancer in about 20 per cent. of the people who are so examined.—From Campaign Notes of the American Society for the Control of Cancer.

NARCOTICS.

PRESCRIPTIONS AND EXEMPT PREPARATIONS.

Amendment of Articles 117, 119 and 148, Regulations 35, Revised. Treasury Department, office of Commissioner of Internal Revenue, Washington, D. C. To collectors of internal revenue, narcotic agents in charge, and others concerned:

1. The second paragraph of Article 117, Regulations 35, Revised, is hereby amended to read as follows:

"*Exceptions.*—Exceptions to this rule may be properly recognized (1) in the treatment of incurable disease, such as cancer, advanced tuberculosis, and other diseases well recognized as coming within this class, where the physician directly in charge of a bona fide patient suffering from such disease prescribes for such patient, in the course of his professional practice and strictly for legitimate medical purposes, and in so prescribing, indorses upon the prescription that the drug is dispensed in the treatment of an incurable disease (or if he prefers he may indorse upon the prescription 'Exception (1) Art. 117)'; and (2) where the attending physician prescribes for an aged and infirm addict whose collapse from the withdrawal of the drug would result in death and in which case he indorses upon the prescription that the patient is aged and infirm, giving age, and that the drug is necessary to sustain life (or if he prefers he may indorse upon the prescription 'Exception (2) Art. 117)'."

2. The second paragraph of Article 119, Regulations 35, Revised, is hereby amended to read as follows:

"*Druggists.*—The druggist who fills a prescription must preserve the prescription for a period of two years from the date indicated thereon. (See Art. 124)."

3. Article 148, Regulations 35, Revised, is hereby amended by striking out the word "signature" and substituting therefor the word "name," both in the fourth sentence thereof, and in the heading of the second column of the form therein prescribed of record, to be kept by retail dealers.

D. H. Blair,
Commissioner of Internal Revenue.

Approved: January 12, 1923.
A. W. Mellon,
Secretary of the Treasury.

SYNTHETIC THYMOL.

By making synthetic thymol, a drug that is used extensively as an antiseptic and a specific against the hookworm disease, Department of Agriculture chemists have again vanquished Nature at her own game. Thymol is now imported from India, where it is found in the seed of one of the plants growing there. The chemists have found that artificial thymol identical with the natural product can be made from cymene, a waste product in the paper industry. Thymol is now sold for $4.50 a pound, but it is estimated that the synthetic product can be made for about $2.50 a pound. As there are 2,000,000 gallons of cymene wasted annually in this country and Canada, chemists expect that this country will soon be able to produce all the thymol consumed here.—*Science.*

CHEAPER RADIUM.

It is announced by the United States Geological Survey, that the price of radium has decreased owing to the discovery of radium bearing ores in Africa, which are easily worked at a much lower cost than the American mines. This caused a drop from $120,000 a gram to $70,000, which is the lowest price at any time since radium has been used. In connection with Cancer Week, the Survey announced, the state of New York and the city of Philadelphia have each bought two grams for the use of their citizens, and the city of Quebec one gram.—*Science.*

NEW LABORATORY AT THE UNIVERSITY OF CHICAGO.

Ground has been broken for the new laboratory of the department of hygiene and bacteriology at the University of Chicago to stand between the psychological laboratory on the north and the universtiy press on the south. The building, of brick, will front 110 feet on Ellis Avenue and will contain a general laboratory, a laboratory devoted to the bacteriology and chemistry of water and foods, five research rooms, a room equipped with sterilizing devices, and an animal room.—*Science.*

IMMUNISATION AGAINST MEASLES.

In 1906, during an epidemic of measles, Cenci reported that he found the course of the disease was attenuated and shortened by treatment with diphtheria antitoxin. Galli (*Pediatria*, Naples, October 1, 1922, 30, No. 19) states that 8 of the 12 children in an institution, who had been exposed to infection, developed measles within 8 days. The others were given an injection of diphtheria antitoxin, and none of them developed measles, although they were in constant contact with the measles cases. In another house with 36 girls, 3 developed measles simultaneously. Twenty-four of these girls who had never had measles previously were then injected with 5 c.c. of normal horse serum, and none of these developed measles except the three who were already in the incubation stage at the time of the injection. Galli suggests that the parenteral protein therapy of the horse serum and antitoxin may be credited with this phophylactic action.—*The Medical Press and Circular*, London.

THE AMERICAN CHILD HEALTH ASSOCIATION.

Under the leadership of Herbert Hoover, chairman of the American Relief Administration, a union of societies known as the American Child Health Association, has been formed for the protection and promotion of child health in America. This Association will put the full strength of the American Relief Administration behind a merger of two great national organizations at present doing work in America for children. One is the American Child Hygiene Association, which for thirteen years has been striving to improve conditions for the mother before and after child-birth; for the infant and for the pre-school child up to five years of age; under the presidency of such men as Dr. Philip Van Ingen of New York, Dr. Samuel McClintock Hamill of Philadelphia, Dr. Henry L. K. Shaw of Albany, N. Y.; Dr. J. H. Mason Knox, Jr., of Baltimore, Dr. S. Josephine Baker of New York, Mrs. William Lowell Putnam of Boston, and finally of Mr. Hoover himself. The other is the Child Health Organization of America, which, under the presidency of Dr. L. Emmett Holt, aims to have health taught in the schools as a positive, not a negative subject, and to make the teaching such a game as will engage the active interest of every boy and girl in America. Both have already done remarkably successful work, which will now be greatly broadened. Earnestly supporting them will be the American Relief Administration, translating into service through the new Association, the experience in organization and administration gathered in eight years from the time of the Belgian invasion when it functioned under the name of the Commission for Relief in Belgium, through the years of reconstruction in Eastern and Central Europe and down to the present day in Russia.

The American Child Health Association will cover the whole cycle of child life prior to the period when the individual enters the industrial or college world. Such a work cannot be effected without the fullest co-operation of the local welfare agencies already functioning. It needs the active assistance of every parent, doctor, nurse, teacher, public health official and social worker in the country. The aim of the new Association then is to create what may be described, paradoxically, as a decentralized Child Health Union, by which we mean it wants every agency and every individual as a member of the national body, but not for the purpose of usurping or even directing local activities. On the contrary, its object will be to stimulate, when necessary, and to strengthen in every way possible the work now being done in the local communities. With that object in view it will have definite concrete aids to offer active members.

Firstly, the American Child Health Association will act as a clearing-house of information on all national child health activities. It will act, so to speak, as a switchboard through which a newly-born organization can listen in on the experiences of its elders; through which a struggling organization can learn how best to save its time, effort and money by avoiding recognized pitfalls.

Secondly, it will serve as a source of up-to-date, scientific information on child health, prepared by the best-qualified doctors and other professional workers in this and other countries.

Thirdly, it will supply a field service composed of experts who, on request of a community, will help organize a new local health body or help solve the problems of one already existing.

Finally it will aim to establish standards for child health work on a sound medical basis, to eliminate waste in the practical application of these standards, to co-ordinate the work already being done in such a way as to avoid all duplication of effort.

PNEUMONIA BACTERIOLOGY.

Squibb Memoranda for January has published some bacteriological findings of Avery and Cole in pneumonia.

A number of different organisms may cause pneumonia. In the case of *lobar* pneumonia, by far the most important, are the different varieties of pneumococci. Among 529 cases diagnosed clinically and pathologically as acute lobar pneumonia, Avery and his co-workers found:

Diplococcus pneumonia	454
Streptococcus pyogenes	7
Bacillus influenza	6
Friedländer's bacillus	3
Staphylococcus aureus	3
Streptococcus mucosus	1
Mixed infections with combinations of staphylococcus aureus, Friedländer's bacillus, B. influenza, streptococcus pyogenes and strepococcus viridans	6
Undetermined	49
Total	529

Cole gives the following table of cases occurring in New York City:

Infecting Type	Cases	Strain %	Deaths	Mortality %
1	34	47	8	24
2	13	18	8	61
3	10	14	6	60
4	15	21	1	7
Totals	72	100	23	32

Army statistics are given to show the value of vaccines in prophylaxis.

ADVISORY COMMITTEE ON ANTHRAX OF THE INTERNATIONAL LABOR OFFICE.

From December 5 to 14 there was held the first session of the Advisory Committee on Anthrax, which the Third International Labor Conference had decided to set up and to convoke with a view to studying thoroughly the problem of industrial anthrax and more especially that of disinfection in the wool industry.

The Committee, which was to include experts of the importing and exporting countries, was composed as follows: Australia, Prof. Oliver;

Belgium, Dr. Glibert; France, Mr. Boulin; Germany, Dr. Frey; Great Britain, Sir William Middlebrook, chairman of the Departmental Committee on Anthrax; Italy, Dr. Loriga; India, Colonel Hutchinson; Japan, Dr. Konai; South Africa, Dr. Dixon; Spain, Prof. Rocca; Sweden, Mr. Ribbing; Observer for the United States, Dr. Dorset.

The Committee was charged with inquiring into:

1. The problem, in all its bearings, of the disinfection of wool and hair suspected of being infected by anthrax.
2. The most practical and effective methods of preventing infection among flocks.
3. To submit a report to the Governing Body in sufficient time to allow the latter to decide upon the necessity of including the question in the agenda of the Fifth International Labor Conference.
4. The possibilities of dealing with infection by anthrax from hides, skins and other suspected animal products.

The preliminary work of the Advisory Committee was summarized in a documentary report of the Industrial Hygiene Section of the International Labor Office, containing information from twenty-seven countries as to statistics and legislation regarding the danger of anthrax among human beings and animals. The report also contained an analytical chapter on disinfecting methods proposed and measures contemplated to combat the diseases among animals. Moreover, the chairman of the committee, Sir William Middlebrook (Great Britain), distributed a pamphlet containing a brief survey on the development of the question and the results obtained in England during the last few years.

The result of a long and lively discussion was the approval of the following items:

1. That hair used in the brush-making and upholstering industries shall be disinfected before the materials are handled industrially.
2. That wool and hair to be used in the textile industry shall be disinfected before the materials are handled industrially, except in the following cases:
   (a) If the country of origin is included in the schedule of countries where the danger is slight;
   (b) If the material to be imported has already been disinfected by a process recognized as effective:
   (c) If wools and long hair have to be sorted before washing, unless these products are not included in the list of harmless products;
   (d) In such other cases as may be determined by the committee.

The experts who had come to give evidence at the request of certain members of the committee agreed that the proportion of wool imported into England which does not require sorting before washing is extremely small and that it is almost always this kind of goods which gives rise to the danger of anthrax among the workers; that if it were technically possible to sort the wools after washing, it would be bad from the commercial point of view.

The list of countries where the danger is slight will be brought up to date each year by the Advisory Committee on Industrial Hygiene of the International Labor Office. In the same way the industrial processes of disinfection will have to be approved by the Governing Body of the International Labor Office in accordance with the opinion of the Advisory Committee on Industrial Hygiene and, eventually, in conformity with the assent of the Health Committee of the League of Nations.

While limiting this report to the most important items, it is, however, necessary to note the criteria adopted for the preparation of the schedule of countries subject to slight danger:

As regards importing countries, raw materials, the country of origin of which is known and that have not caused any case of anthrax in the importing countries; or the absence of anthrax spores after bacteriological examination.

As regards countries of origin, the absence of anthrax among animals or the application of strict measures for stamping out any outbreaks at the source.

Precautions should also be taken to prevent the infected materials from being mixed with the ordinary materials of commerce.

The committee was of opinion that the best precautions against the danger of anthrax among flocks are at the present time the following:

Compulsory notification and official verification of cases of anthrax.

Isolation of animals suffering from or suspected of suffering from anthrax.

The destruction of the entire carcass of any animals dead of or suspected to have died of anthrax, and disinfection of the immediate surroundings of the place where the animal has died as well as of the premises where it has been kept.

Preventive inoculation of animals against anthrax.

With regard to this item of its agenda, the committee decided that the International Labor Office would have to study thoroughly the question in conjunction with the International Institute of Agriculture in Rome in order to arrive at some practical conclusions of an international character.

The Committee agreed to adopt the following resolution:

"The Committee is of opinion that in most countries the principal danger of industrial anthrax arises in the manipulation of hides and skins and recognizes the impossibility of securing at the present time complete disinfection to protect against this danger.

"The committee, therefore, recommends that regulations be laid down in the different countries having for their object the protection of the workers and the soil against infection by anthrax from hides and skins.

"The committee further suggests that the International Labor Office, in conjunction with the Health Committee of the League of Nations, should organize international research and invite nations and organizations chiefly interested to undertake such research in their respective countries.

"The committee considers that in view of the fact that all countries using infected materials will benefit by the discovery of a satisfactory process of disinfection, it is desirable that the Governing Body should take into consideration the possibility of finding grants in aid of research undertaken for that purpose."

In the case of horns and hoofs the disinfection appears to be an extremely simple matter in practice, as they generally have to be treated by boiling, in order to be used for industrial purposes.

In the case of bones, the committee admitted that, due to the fact that the danger of infection does not appear so great and the industrial treatment to which they are subjected seems to make preliminary disinfection difficult, this treatment is generally equivalent to a disinfecting process. Nevertheless, in cases where such disinfection is not carried out, the different countries should be recommended to prescribe protective measures analogous to those for hides and skins.

The final report of the committee was drawn up by Dr. Glibert (Belgium) and Mr. Ribbing (Sweden) and adopted unanimously with the exception of one abstention and two votes withheld on a point concerning wools.

EXPECTATION OF LIFE IN EPILEPTICS

According to most recent information available, on the subject of expectation of life in the average general community, throughout the United States, one finds that 54.3 years is the present average. Among 8191 insane under institutional care, it was found that the average age at death approximated fifty-three years. Epileptics in the same institutions, of an older group than at the Colony, attained an average age of 46 years. In a series of 8675 epileptics, residing in institutions in various parts of the world, the average age at death was 36 years. In a series of 3834 feeble-minded residing in various institutions, the average age at death was 27.4. In defectives as a whole, the expectation of life is naturally less than with the normal.—Annual Report of the Craig Colony.

VENEREAL DISEASE CONTROL IN CHICAGO.

It is of interest to note that Chicago was one of the first, if not the first large city in the United States, to inaugurate an efficiently conducted campaign against venereal diseases along scientific and humanitarian lines. Taking advantage of the favorable condition brought about by the initial action of the former commissioner, the present commissioner seized the opportunity to intensify the fight already begun against venereal diseases. The boldness and intensity of the attack and the fair and sane attitude assumed has resulted in arousing right thinking citizens of all classes to see the necessity of dealing with these deadly diseases in the same way as with other contagious diseases. The commissioner is fighting contagious diseases, not persons. The disease is found alike in both sexes and must be attacked in both sexes. No one would think of quarantining girls for diphtheria and ignore restrictions for boys having the same disease.—Bulletin Chicago School of Sanitary Instruction.

JOINT COMMITTEE ON STATE AND NATIONAL LEGISLATION.

MASSACHUSETTS MEDICAL SOCIETY.

Dr. J. W. Bartol, Chairman, 3 Chestnut Street, Boston.

Dr. E. H. Stevens, 1911 Massachusetts Avenue, Cambridge.

Dr. F. E. Jones, Quincy.

Dr. J. S. Stone, 286 Marlboro Street, Boston.

Dr. T. J. O'Brien, Secretary, 501 Beacon Street, Boston.

MASSACHUSETTS HOMEOPATHIC SOCIETY.

Dr. S. H. Calderwood, 221 Warren Street, Roxbury.

Dr. R. F. Hovey, 5 Oak Street, Springfield.

Dr. C. T. Howard, 510 Commonwealth Avenue, Boston.

Dr. W. T. Lee, 220 Clarendon Street, Boston.

Dr. H. H. Pollock, Massachusetts Homeopathic Hospital, Boston.

Dr. J. P. Sutherland, 295 Commonwealth Avenue, Boston.

AUXILIARY COMMITTEE.

Berkshire—Dr. Martin M. Brown, 117 Main Street, North Adams; Dr. Henry Colt, 193 South Street, Pittsfield.

Berkshire-Hampden—Dr. Clifford S. Chapin, Great Barrington; Dr. E. W. Brown, Northampton.

Bristol I—Dr. A. R. Crandell, 48 Church Green, Taunton.

Bristol II—Dr. A. I. Connell, 456 East Main Street, Fall River.

Bristol III—Dr. E. F. Cody, 105 South Sixth Street, New Bedford.

Cape—Dr. C. E. Harris, Hyannis.

Essex I—Dr. W. T. Hopkins, 7 Atlantic Street, Lynn.

Essex II—Dr. W. G. Phippen, 31 Chestnut Street, Salem.

Essex III—Dr. F. W. Snow, Newburyport.

Essex IV—Dr. F. W. Anthony, 50 Merrimack Street, Haverhill.

Essex V—Dr. J. J. O'Sullivan, 340 Haverhill Street, Lawrence.

Franklin-Hampshire—Dr. N. P. Wood, Northfield.

Hampden I—Dr. E. A. Bates, 57 Chestnut Street, Springfield.

Hampden II—Dr. S. A. Mahoney, 630 Dwight Street, Holyoke.

Middlesex I—Dr. E. H. Bigelow, Framingham Center.

Middlesex II—Dr. L. B. Clark, Waverley.

Middlesex III—Dr. C. E. Mongan, 24 Central Street, Somerville.

Middlesex IV—Dr. E. S. Jack, 56 West Emerson Street, Melrose.

Middlesex V—Dr. E. P. Stickney, Arlington; Dr. R. Collins, 837 Main Street, Waltham.

Middlesex VI—Dr. G. N. P. Mead, Winchester.

Middlesex VII—Dr. J. H. Lambert, 202 Merrimack Street, Lowell; Dr. E. D. Richmond, Reading.

Middlesex VIII—Dr. B. H. Hopkins, Ayer; Dr. M. A. Tighe, 743 Bridge Street, Lowell.

Norfolk I—Dr. W. C. Kite, Milton.

Norfolk-Suffolk—Dr. F. P. Denny, 111 High Street, Brookline.

Norfolk-Plymouth — Dr. Gilman Osgood, Rockland.

Plymouth II—Dr. F. J. Ripley, 12 Cottage Street, Brockton.

Suffolk I—Dr. R. H. Houghton, 308 Sumner Street, East Boston.

Suffolk II—Dr. G. M. Balboni, 9 Prince Street, Boston.

Suffolk III—Dr. E. J. Denning, 577 Broadway, South Boston.

Suffolk IV—Dr. P. J. Jakmauh, 509 Broadway, South Boston.

Suffolk V—Dr. C. Phipps, 31 Massachusetts Avenue, Boston.

Suffolk VI—Dr. A. A. Horner, 86 Bay State Road, Boston.

Suffolk VII—Dr. T. J. Murphy, 372 Dudley Street, Roxbury.

Suffolk VIII—Dr. A. N. Broughton, 46 Eliot Street, Jamaica Plain.

Worcester I—Dr. W. J. Delahanty, 5 Trumbull Square, Worcester; Dr. G. O. Ward, 875 Main Street, Worcester.

Worcester II—Dr. F. H. Baker, 4 Linden Street, Worcester; Dr. J. W. O'Connor, Memorial Hospital, Worcester.

Worcester III—Dr. A. P. Lowell, 52 Hartwell Street, Fitchburg.

Worcester IV—Dr. W. L. Johnson, Uxbridge.

Worcester-Hampden—Dr. J. J. Goodwin Clinton; Dr. Mary H. Sherman, Brookfield.

VACCINATION IN NEW HAMPSHIRE.

The State Board of Health of New Hampshire has published a Special Bulletin dealing wholly with the need of general, compulsory vaccination. The activities of the anti-vaccinationists in New Hampshire have unfortunately made this necessary.

The Denver epidemic of 1921 is used as an example of the danger of laxity in vaccination, and the increase in smallpox in the United States in the last five years is brought to the attention of the reader. These figures follow:

Smallpox in the United States.

Year	Cases		Deaths	
1916	15,450	(33 states)	48	(29 states)
1917	45,137	(37 states)	297	(35 states)
1918	69,819	(35 states)	345	(27 states)
1919	53,344	(36 states)	287	(28 states)
1920	94,691	(36 states)	366	(28 states)

NEW AND NONOFFICIAL REMEDIES.

Digitan Ampules (for Hypodermic Use).—Each c.c. contains 16 minims (1 c.c.) of a sterilized solution of digitan (see New and Nonofficial Remedies, 1922, p. 105), equivalent to digitan, 1½ grains (0.1 gm.). Merck & Co., New York.

Digitan Solution (for Oral Use).—1 c.c. contains digitan (see New and Nonofficial Remedies, 1922, p. 105), 1½ grains (0.1 gm.). Merck & Co. Jour. Am. Med. Assn., Jan. 13, 1923, p. 106.

COUNCIL ON PHARMACY AND CHEMISTRY.

During January, the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion in New and Nonofficial Remedies:

Lederle Antitoxin Laboratories: Bacillus Acidophilus Milk-Lederle.

E. R. Squibb & Sons: Bacillus Diphtheroid Allergen-Squibb, Staphylococcus Citreus Allergen-Squibb, Bacillus Influenzae Allergen-Squibb, Egg Yolk Globulin Allergen-Squibb, Horse Serum Allergen-Squibb.

Winthrop Chemical Company: Theocin Sodium Acetate.

Correspondence.

HISTORICAL INTEGRITY.

Mr. Editor:

In issue No. 1 of the B. M. S. J. this year, brand new lustre is added to the name of Hippocrates, if it should be seriously meant, yet opinions are not undivided regarding the piousness of adherence to historical integrity in the journalistic literature of our age.

However, new information which adds or detracts from the splendor of the name of Hippocrates touches the feelings of all of us. May it not be pardonable, then, if one of us recalls attention to the fact that nerves were unknown to the Greek medicine of the fifth century, B. C., and even to the fourth? The existence of nerves and their connection with the brain were revealed and demonstrated first by Erasistratos of Ceos and Herophilus of Chalcedon, both of whom repaired to Alexandria at about 290 B. C., there to study, investigate, teach and practice. The cradle of the art of dissection (and vivisection upon human subjects) is traced by historians to the medical school of Alexandria, in the third century, B. C., but it is considered established that both Erasistratos and Herophilus were disciples of known followers of Hippocrates and, undoubtedly, the traditions of Hippocrates' teaching and practice had a vivid influence upon the eager students and investigators in the early period of the Alexandrian School.

Very truly yours,
CLAES JULIUS ENEBUSKE, PH.D., M.D.

A PHYSICIAN NEEDED.

Sturbridge, Mass., January 28, 1923.

Mr. Editor:

There is a good opening in the town of Sturbridge for a physician as per statement of a Southbridge doctor. Sturbridge needs a doctor and needs one badly.

Will you kindly inform me how to proceed in order to get one.

Yours very truly,
C. P. SILENCE,
Chairman of Selectmen,
Agent of Board of Health.

Address, Fiskdale, Mass.

◆

BOTON CITY HOSPITAL—Staff clinical meeting in Cheever Surgical Amphitheatre on Friday evening, February 16, 1923, at 8 o'clock. Subject. "The Essential Physiology of the Kidney and Its Clinical Value," Dr. W. Richard Ohler. Discussed by Dr. Channing Frothingham. Physicians and students invited. Refreshments served at 9.30 p.m.

JOHN J. DOWLING, M.D.,
Superintendent,

NOTICE.

CLINIC AT THE CHILDREN'S HOSPITAL.—There will be a Staff Clinic at the Children's Hospital on Friday afternoon. February 9, at 4:30. Physicians are cordially invited.

NOTICE OF MEETING.

The Massachusetts Tuberculosis League will hold its annual meeting in Springfield. Mass.. Thursday. Friday and Saturday, April 26, 27. and 28, 1923.

The League has invited the other health agencies to join with it in making this a general health conference.

ROBERT V. SPENCER,
Executive Secretary.

NOTICE.

The Union des Aveugles de Guerre, a French organization. is struggling to maintain its centre for soldiers who were blinded in the war. This centre supplies recreation, Braille Library, buys raw material, aids in sales, finds employment, etc. Its valuable services must not be allowed to lapse.

Through the coöperation of Dr. de Lapersonne. chief of the eye clinic at the Hotel Dieu, Paris, Drs. de Schweinitz, Wilmer, Parker, McReynolds and other American ophthalmologists and practitioners have expressed cordial interest in this enterprise and are lending their support to the Union. The material aid of the medical profession in America is earnestly requested in this worthy cause.

Contributions should be sent to Dr. Theodore C. Merrill, Delegate for America, 10 bis rue Herran, Paris, XVIe. The appreciation of the blind who benefit by the Union and its centre, is cordially extended to all who sympathetically respond to this appeal.

THEODORE C. MERRILL, M.D.,
Delegate for America of the
Union des Aveugles de Guerre.
10 bis rue Herran, Paris, XVIe.

MASSACHUSETTS MEDICAL SOCIETY, SUFFOLK DISTRICT.

Dr. Béla Schick, Professor in the University of Vienna, will speak on Diphtheria at the Boston Medical Library on Saturday, February 10, at 8.15 P. M. The medical profession is cordially invited to attend.

◆

SOCIETY MEETINGS.

DISTRICT SOCIETIES.

A list of society meetings is herewith published. This list will be changed on information furnished by the secretaries of the societies, and will appear in each issue.

Barnstable District:—Hyannis, May 4, 1923.

Bristol South District:—Fall River, May 3, 1923.

Essex North District:—Lawrence, Y. M. C. A. Building (Annual Meeting), May 2, 1923.

Meetings of the Suffolk District and the Boston Medical Library, at the Library:

February 28, 1923:—Medical Meeting. "Colitis," Dr. Henry F. Hewes, Boston.

March 28, 1923:—Surgical Meeting. "A Review of What Surgery Can Accomplish in Diseases of the Thoracic Organs, with a Forecast of the Future," Dr. Howard Lilienthal of New York.

April 25, 1923:—Annual Meeting. Election of Officers. "The Record of the Past Twelve Years in Syphilology, with a Forecast of the Future." A series of 10-minute papers. Dr. C. Morton Smith, Boston, will preside.

The Springfield Academy of Medicine meets the second Tuesday of each month. Schedule of speakers includes the following names: Dr. Alexis Carrel, Dr. W. B. Long, Dr. J. W. Williams, Dr. W. S. Thayer, and Dr. Barton Cooke, Hist. The date for each speaker has not been assigned.

Middlesex East District:—

March 21, 1923:—Mental Factors in Childhood. Paper by Dr. William Healy.

April 18, 1923:—Interpretation of Laboratory Findings. Papers by Dr. E. G. Crabtree and one to be announced later.

May 9, 1923:—Annual Meeting.

All meetings except the Annual Meeting will be held at the Harvard Club in Boston. A. E. Small, Secretary.

Worcester District meetings are scheduled as follows:

February 14, 1923:—The meeting will be held at the Worcester City Hospital at 4.15 P. M. The program will consist of a series of papers by members of the staff.

March 14, 1923:—The meeting will be held at St. Vincent's Hospital at 8.15 P. M. The program will consist of a series of papers by members of the staff.

April 11, 1923:—The meeting will be held at Memorial Hospital at 8.15 P. M., and the program will consist of a series of papers by members of the staff.

May 9, 1923:—Annual Meeting and banquet.

STATE, INTERSTATE AND NATIONAL SOCIETIES.

NEW ENGLAND PEDIATRIC SOCIETY:—The following are the dates for meetings the coming season. Each meeting is on the second Friday of the month at the Boston Medical Library: February 9, March 9, April 13 and May 11.

February, 1923:—New England Dermatological Society Meeting, February 14, 1923, at 3 P. M., in the Skin Out-Patient Department, Massachusetts General Hospital; C. Guy Lane, Secretary.

February, 1923:—Boston Medical History Club will meet the third Monday of this month.

March, 1923:—Massachusetts Society of Examining Physicians (date and place undecided); Hilbert F. Day, Secretary.

March, 1923:—Boston Association of Cardiac Clinics. Meeting March 15, 1923, at 8.15 P. M., Boston City Hospital. Subject: Prevention and Relief of Heart Failure.

March, 1923:—Boston Medical History Club will meet the third Monday of this month.

April, 1923:—New England Dermatological Society meeting, April 11, 1923, at 3 P. M., in the Surgical Amphitheatre, Boston City Hospital; C. Guy Lane, Secretary. Massachusetts Association of Boards of Health, April 26, 1923, Boston; W. H. Allen, Mansfield, Mass., Secretary.

April, 1923:—Boston Medical History Club will meet the third Monday of this month.

May, 1923:—Massachusetts Society of Examining Physicians (date and place undecided). American Pediatric Society meeting, May 31, June 1 and 2, 1923, at French Lick Springs Hotel, French Lick, Ind.; H. C. Carpenter, Secretary.

May, 1923:—Boston Association of Cardiac Clinics. Meeting May 17, 1923, at 8.15 P. M., Children's Hospital. Subject: Rheumatism and Chorea and Heart Disease.

June, 1923:—American Medical Association, San Francisco June 25-29, 1923; Olin West, Chicago, Ill., Secretary.

July, 1923:—Massachusetts Association of Boards of Health, July 26, Nantasket; W. H. Allen, Mansfield, Mass., Secretary